DRIVER LICENSING EXPERIENCE OF KOREAN AUSTRALIAN NOVICE DRIVERS

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Abstract

Studies have identified that graduated licensing has been the most promising method to reduce the crash risk of novice drivers. However, research suggests that the effectiveness of graduated licensing differs between urban and rural novice drivers and also according to race or ethnicity. Supervised driving practice during the learner period is an important component of graduated licensing systems in Australia and in many other countries. However, a previous study identified that falsification of logbooks entries was more common among certain demographic groups, yet the factors underlying this issue were not well understood. It was unclear whether it was due to a lack of understanding of the importance of supervised driving or whether it reflected the lack of access to vehicles and supervising drivers, or less respect in the effectiveness of the driver licensing requirements. It was predicted that these factors may differ across ethnic groups, depending on socioeconomic factors and cultural attitudes to road safety.

In an attempt to better understand these issues, two studies of the experience of the Graduated Driver Licensing (GDL) System by foreign-born novice drivers were conducted, focusing on Korean-born Australians as a case study. Their family, socioeconomic and cultural factors were examined in relation to their experiences and perceptions of the GDL system and also their driving behaviours and attitudes to the road rules. Bronfenbrenner's ecological model was used as a theoretical framework to structure the exploration of the perceptions, behaviours and attitudes of foreign-born novice drivers. The five systems in the model were utilised for different levels of factors influencing the novice drivers' experiences of the GDL system.

In Study 1, three focus group sessions were conducted with two groups of young Korean Australian drivers and another group consisting of parents of young Korean Australian drivers. Through the sessions, young drivers reported their difficulties in fulfilling the GDL requirement as foreign-born residents and perceived the system as lengthy and complicated. However, parents believed the system was well structured and provided comprehensive training that was necessary for young drivers to develop their skills before becoming fully licensed. Hence there were conflicting views of the system. Nevertheless both groups agreed that the system was well developed in comparison to the licensing system in Korea.

Study 2 was developed from the findings of Study 1 and was informed by previous studies on young novice drivers by Scott-Parker and colleagues (2012). In total 71 Korean-born novice drivers from across Australia completed the online survey to examine the effects of cultural and socioeconomic factors that may have influenced their driving behaviours and experience of the GDL system. The general pattern of results showed differences in attitudes and driving behaviours according to their cultural and family factors. When their experiences with the GDL system were investigated, some outcomes contradicted the findings of the first study. The discrepancies between the results of the two studies suggest that immediate factors, such as whether young people are living with their parents or not, may be equally important as underlying cultural differences in their effect on progression through GDL. The second study confirmed that many of the increases in risky driving practices from the learner to the provisional phase observed among Australian novice drivers also occur among foreign-born drivers, although the influence of peers may be less and that of parents, greater. Specific differences between road rules between the country of birth and Australia can also exert an important influence on behaviour.

In this case, the less rigorous seatbelt legislation in Korea appeared to result in poorer seatbelt use by passengers of the young drivers.

In conclusion, this program of research provided insight into the issue of driving behaviours of foreign-born drivers and their experience of progressing through the GDL system. It has provided greater understanding of the influence of cultural and socioeconomic factors on driving behaviour and experience through the application of Bronfenbrenner's ecological model. Research in this area may inform new approaches and innovative methods to improve driver compliance with the GDL system and road rules. Therefore, further research is necessary for improving the system to meet the needs of drivers with different cultural and environmental factors and thus improve road safety.

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Statement of Authorship

The work contained in this thesis has not been previously submitted to meet requirements for an award at this or any other higher education institution. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except where due reference is made.

QUT Verified Signature

Signature

Date: November-2014

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Chapter 1 – Introduction

1.1 Introductory Comments

This chapter provides an orientation to the research presented in this thesis. The primary aim of the research is to understand the experiences and perceptions of the graduated driver licensing system for foreign-born drivers in Australia. This chapter provides some background to the multicultural Australian population and the current driver licensing system. It also defines the rationale and the scope of the research.

1.2 Research Background

People from many nations live, work and drive in Australia. The 2011 Australian Census (ABS, 2012) revealed that over a quarter (26%) of the Australian population was born overseas (first generation Australians) and a further one fifth (20%) had at least one overseas-born parent (second generation Australians). First generation Australians are a diverse population including Australian citizens, permanent residents, and long-term temporary residents and in 2011, comprised 27% of the population. Second generation Australians comprised an additional 20% of the total population.

The multicultural nature of Australia and the large number of tourists visiting the country indicates that there are many drivers on Australian roads who have learnt to drive under different environments and road regulations. In addition, factors such as culture, language and differences in rules and practices of origin influence the driver's behaviour (Hilton, 2006).

Research has identified differences in driving behaviours of foreign-born residents in comparison to native-born drivers (Boufous et al., 2010). Foreign-born

drivers may have differences in their knowledge, values and experiences and this is likely to differ across different nationalities. Previous research has shown that graduated driver licensing (GDL) systems improve young driver safety, but little is known about how well the systems work for foreign-born drivers.

In Australia, the graduated driver licensing system is in place for young novice drivers to develop the necessary skills before becoming fully licensed. Within this system, the novice driver gains driving experience whilst being supervised on the Learner's permit. When they have successfully fulfilled the requirements and have passed the on-road examination, they proceed to the unsupervised provisional driving stage with specific driving restrictions to limit exposure to dangerous situations but still allowing them to gain necessary driving experience. When the requirement periods have been completed, the drivers are then able to obtain a full unrestricted driver's licence (Beanland et al., 2013). The rationale for this staged approach is that novice drivers will develop driving skills by gaining experience under lower risk situations, thereby reducing the likelihood of novice driver crashes.

Many people who come to Australia already hold a driver's licence from their country of origin. Drivers' licences from specific countries (referred to as "prescribed" countries) can be exchanged for Australian driver licences without further testing (Austroads, n.d.). Licence holders from some other countries (referred to as "recognised" countries) do not need to take any written or on-road driving test and their licence can be exchanged with an Open licence if the driver is over 25 years and meets the relevant licensing criteria of the prescribed country. The list of prescribed and recognised countries can be accessed through the Austroads website.

1.3 Research Objective

The purpose of the research is to better understand the experiences of foreign-born novice drivers as they progress through the graduated licensing system in order to be able to modify the system to achieve improved safety outcomes. The research focuses on Korean Australian novice drivers but many of the findings may apply to other foreign-born novice drivers.

1.4 Rationale for Research

Foreign-born drivers may have different knowledge, values and experiences and this is likely to vary across different nationalities. Among the diverse foreign nationalities in Australia, Koreans were selected for the research. There is little known about Korean-born drivers, however their experiences may shed light on the experiences of other nationalities in Australia. Research has shown that graduated driver licensing helps to improve young driver safety overall, but little is known about how well the system works for foreign-born novices.

The Republic of Korea does not have a graduated driver licensing system (see section 3.4.6 for further explanation of the Korean driver licensing system). However, it has now been categorised as a "recognised" country, hence licence holders from Korea are no longer required to re-take the driver licensing examination in Australia. Consequently, the parents of young Korean Australians may have limited knowledge and experience of the Australian driver licensing systems. This may result in difficulties for young Korean Australian novice drivers. For example, parents may not understand the rationale for supervised driving leading to less practice and greater falsification of the logbook. For this reason there is a need to research the factors which influence the driving licensing experience of foreign-born novices and whether there are any potential threats to road safety.

1.5 Theoretical Framework

A range of theoretical frameworks was considered for this research, and will be discussed in section 2.5. Among them, Bronfenbrenner's Ecological Model was considered to be a suitable framework for the research given that novice drivers' experiences would be influenced by their personal, family and cultural factors (both Australian and Korean), and the requirements of the graduated licensing system (Bronfenbrenner, 1979). With the application of the levels of the model, this would potentially be able to explain any differences that are found between young Korean Australian drivers and native Australian drivers.

1.6 Demarcation of Scope

To investigate the effectiveness of the GDL for foreign-born populations and their experiences, Korean Australians were selected as a particular sample. Korean-Australians are a growing population in Australia, and many aspects of the study can be applied to other foreign-born populations in Australia. Information in regards to Korean-born drivers is very limited and little known.

To address the matter of young drivers and their experience, two studies were conducted: Study 1 was a focus group discussion and Study 2 was an online questionnaire. Young Korean Australians aged between 16 to 25 years were sampled for both studies and their only requirement for participation was an Australian driver's licence including Learner permit drivers. To investigate the effectiveness and the understandings of the GDL system, the parents of Korean novice drivers were sampled for a focus group discussion (Study 1) to understand their views.

1.7 Outline of Thesis

The structure of the thesis is as follows:

Chapter 2 reviews the relevant literature on the behaviour of foreign-born drivers including tourists and then specifically examines research on the attitudes and

perceptions of immigrant drivers. Furthermore, research into the young driver crash problem will be presented with the effectiveness of the graduated driver licensing system as its countermeasure.

Chapter 3 provides the methodology and results of the focus group study (i.e. Study 1) conducted in Queensland. This study was used to provide relevant information in order to develop the questionnaire for Study 2. Experience of the process and perceptions of the current GDL system were investigated with two different focus groups, firstly with the Korean Australian novice drivers and also with the parents of Korean Australian novice drivers. The research centred on the framework of Bronfenbrenner's ecological model to better understand the reasons behind such experience and perceptions.

Chapter 4 begins with a description of the methodology and an analysis of the quantitative study (i.e. Study 2). The results of the analysis are then presented according to the theoretical framework of the five stages of Bronfenbrenner's ecological model. This study examined the five stages of determinants in ecological human development to address the driving behaviour, experiences and perceptions of the Australian GDL system among Korean Australian novice drivers.

Chapter 5 presents the results of the research, answering the research questions identified in Chapter 2. Furthermore, the implications for road safety and future directions for research in the area of driver licensing for foreign-born drivers are discussed.

Chapter 2 – Literature Review

2.1 Introductory Comments

This chapter examines the issues related to overseas-born drivers and the problems they experience due to their socioeconomic and cultural backgrounds. In particular, literature on young novice drivers who were born overseas is explored through this chapter, and it is supplemented with research information on how the Graduated Driver Licensing (GDL) system works as a measure to reduce crash risk and improve road safety. The review then focuses on Korean Australians. The aim of this chapter is to examine research relevant to the effectiveness of the GDL for foreign-born novice drivers and thus identify the current gaps in literature and further enhance the knowledge in this field.

In section 2.2, the published literature regarding the safety and driving behaviours of foreign-born drivers is reviewed. Cultural and socioeconomic factors are examined as potential contributors to the diversity in driver behaviour.

Section 2.3 provides a brief review of the young novice driver problem. Those studies which have compared the safety of young drivers of different ethnic background are highlighted, followed by an examination of the effectiveness of graduated driver licensing as a countermeasure to resolve the young driver problem.

Section 2.4 provides background information regarding the Korean population residing in Australia. As the current research is focused on the Korean population, information regarding their socioeconomic status, cultural background and heritage is outlined.

Section 2.5 explains the theoretical model that has been adopted to explore the driving behaviours of Korean Australians and their experiences as they progress

through the driver licensing system in Australia. The five systems of Bronfenbrenner's ecological model are utilised to explain possible differences between Korean Australian and Australian-born novice drivers.

Section 2.6 provides a summary of this chapter and the rationale behind the choice of theoretical model adopted in the current research. Finally, research questions used to guide the research are presented.

2.2 The Safety of Foreign-born Drivers

There has been an increase in the number of foreign-born residents driving in another country. Hence, there have been numerous studies of their driving behaviours in comparison to native-born drivers.

Previous studies have demonstrated differences in crash risk according to the ethnicity of the drivers (Hilton, 2006). Furthermore, research has shown that foreigners were more likely to be engaged in traffic-related crashes than local residents. An examination of hospital records from the Greek island of Corfu reported that foreign drivers were at increased risk in comparison to Greek drivers (Petridou et al., 1999). Another study in Crete found foreigners from left-sided driving countries have increased the risk of crashes by 2.5 times in comparison to those from right-sided countries, especially when they rented rather than owned their vehicle (Petridou et al., 1997). Lack of understanding of traffic control devices, signals and markings can explain this effect (Dissanayake, 2001). In pursuit of this, a study in Greece examined the occurrence of traffic injuries among foreign tourists in comparison to their local residents (Yannis, Golias, & Papadimitriou, 2007). Greece was chosen as a representative country in examining the different categories of foreign drivers. Participants were categorised as drivers from European Union countries, drivers from other than EU nationalities, and Albanian drivers who were

the major immigrants to Greece. Overall, the results showed drivers from EU and other nationalities to be more at risk of traffic crashes than Albanians regardless of the road environment. The greater the geographical distance to Greece the poorer the perception of road safety. Furthermore, Albanians who are mainly permanent residents demonstrated more conservative driving behaviour than other foreign nationals as they would want to abide by their host country's regulations. In addition, limited knowledge of local traffic rules was often associated with the educational or financial level of foreign drivers.

Other studies have examined why drivers born in a foreign country have elevated crash risks whilst driving. A study in Australia was conducted to observe whether people born in other countries were at a higher risk of crashes than locally born residents (Dobson et al., 2004). The study suggested that there may have been two reasons for people born in foreign countries to experience higher rates of death and hospitalisation from road crashes. Firstly is the difficulty in understanding rules and regulations and secondly is the failure to adapt driving on the left-hand side from the right side. However, the study found that drivers born in other countries had equal or lower rates of death or hospitalisation compared to Australian drivers. Particularly, female drivers born in other countries had significantly lower risk regardless of their language and road convention. Nevertheless, the limitation of this study was that the proportion of people having licences may differ among those born in Australia to those born overseas.

A study in Norway was conducted by Assum and Nordbakke (2013) which reported that although the differences in knowledge, attitudes and behaviours were found to be smaller than expected between immigrant drivers and Norwegian-born drivers, in general, immigrant drivers have a higher accident risk than drivers born in

Norway. Furthermore, immigrants from low-income countries showed a higher accident risk than those from higher-income countries. Through the focus group interviews and questionnaires; language problems, attitudes to traffic rules and driving behaviours were able to partially explain for the differences in accident risk. In addition, the number of years lived in Norway and their language fluency has also been found to explain differences in attitudes and driving behaviour to a certain point.

Issues of cultural differences and unfamiliarity with local laws and driving conditions are likely to be greater for international tourists than overseas-born residents. Whilst international tourists are not targeted for road safety initiatives by transport authorities, figures suggest that motor vehicle crashes are the leading cause of injury and death for international tourists (Wilks, 1999).

A study in Queensland, Australia examined the differences in international tourist drivers' safety in comparison to local drivers (Wilks, Watson, & Hansen, 2000). Results supported that although overseas drivers were less likely to be involved with high risk driving behaviours such as speeding and alcohol, there were greater risks due to factors related to disorientation including 'failure to keep left' resulting in 'head-on' crashes, particularly those from right-sided driving countries. The findings showed there was a significant difference between Australians and Asians in relation to the existing speed limit at the point of crash. International drivers were more involved in a serious crash on 100km/h and 110km/h speed zones and less likely on roads with 60km/h and lower limits. However, the higher risk of crashes can be associated with driving patterns such as the driving locations of the tourists rather than incompetency in driving in high speed limits. Moreover, international visitors were reported as being overrepresented for being involved in driver fatigue and failure to keep left crashes. From the statistics for casualty crashes

involving overseas visitors, head-on collisions accounted for 15% and failure to keep left accounted for almost 10% of all crashes. The results confirm that international tourists were significantly more involved in head-on crashes and serious crashes whereas they were less involved in angle, pedestrian-related and rear-end crashes. Furthermore, drivers from right-side countries were overrepresented in head-on crashes as this accounted for 16.3% of their total crash involvement. It is possible that the combination of fatigue and lack of understanding of the driving conditions and road regulations have contributed to the disorientation for international tourist drivers.

2.2.1 International differences in behavioural characteristics

Studies have shown that there are cultural differences that underlie attitudinal and behavioural differences. Cultures can be broadly divided into those that are collectivist and those that are individualistic (Triandis, 1993). Within collective cultures, individuals are encouraged to subordinate their personal goals to the goals of the collective group. Hence within these groups the relationships of the individuals to the ingroups are more stable even when the ingroup asks for high-cost demands for the individual. However, within individualistic cultures, people drop those ingroups that cause inconvenient demands and form new ingroups. Social relations of unequal power status are more frequent among collectivist cultures than individualistic cultures. Thus vertical direction relationships such as parent-child are more important for collectivist cultures and interdependence is maximised, in particular between parent and child, where guidance and consultations are regarded as highly important. However, individualistic cultures demand horizontal relationships such as spouse-spouse or friend-friend where there is greater independence, emotional detachment and privacy for the child. Collectivist cultures

place emphasis on the people rather than the task whereas the opposite happens for individualistic cultures (Triandis, Bontempo, & Villareal, 1988; Hui & Triandis, 1986; Lukes, 1973).

Literature has shown the prevalence of risky driving behaviours and crash risk can vary between cultural and ethnic groups. These differences vary in defining risk amongst the different cultural and ethnic groups. Furthermore, there are contrasts in the level of acceptance of risk between different social and cultural groups (Tursz, 2000). Also drivers' intentions whether to comply or to exceed the speed limit were subjected to their normal and perceived behavioural control (Elliott, Armitage, & Baughan, 2003) and their driving style is influenced by the personality characteristics of the driver, their sense of themselves as a driver and their driving experience. Moreover, the drivers' education level, driving behaviour and attitude can vary according to different countries and cultures. Besides the traffic rules that are defined by different legislations, foreign drivers may not be aware of the various expectations and standards that are present in the country. Different policies can result in risky driving behaviour for foreign-born drivers (Summala, 1996). Also, cultural differences can be associated with attitude, skills and factors that affect the risk of the driver in addition to the risk that is implied as a factor of the foreign environment (Leviakangas, 1998).

Previous studies have reported that Asian Americans were less likely to drink alcohol and drive than Caucasian adolescents or those from other ethnicity (Hilton, 2006). In addition, studies related to sexual activity, alcohol, tobacco, and illicit drug usage have stated that the Asian American adolescents had the lowest prevalence levels in risk-taking behaviours compared to other groups (Tosh & Simmons, 2007). Genetically, biologically, individual predisposing and protective

factors, social and environmental factors such as parenting style and their modelling behaviour towards risk taking and the relationship structures within the families have greatly influenced the risk-taking behaviour of adolescents (DiClemente, Hansen, & Ponton, 1996). Previously research has reported that American adolescents from Asian families had stronger values and expectations of their duty in assisting, respecting and supporting their families than their peers from a European background (Fuligni, Tseng, & Lam, 1999). Besides, families from Asian backgrounds placed greater value on academic success and a stronger commitment to education than families from other ethnicities (Goyette & Yu, 1999). These findings can explain the lower levels in risk-taking behaviour for Asians compared to those from other nationalities, particularly when related to driving behaviour.

Cross-cultural differences in driving skills and safety may be another factor that can partially explain the international differences in accident statistics. Previous findings suggest social behaviour, cognitive processes and attitudes are influenced by the cultural background (Berry et al., 1992) and it has also been reported that subjects from different cultures express different levels of sense of control and aggressiveness which are influencing factors to driving behaviour.

A study examined if there were any cultural differences between the Swedish and Turkish drivers in regards to complying with the speed limits by applying the theory of planned behaviour (Warner, Ozkan, & Lajunen, 2009). When age and gender were adjusted, the results showed that there were differences among different ethnicities of the driver in their intention to comply with the speed limit. Their self-reported compliance was able to be explained by the differences present within their attitude, subjective norm and perceived behavioural control. Swedish drivers were more likely to report a higher compliance rate to the speed limit, a

positive subjective norm and a higher perceived behavioural control in comparison to the Turkish sample. They also reported a higher intention of complying and spent more time observing the limit.

2.2.2 Socio-economic status and driving

There have been studies that displayed socioeconomic differences as contributors to rates in mortality and morbidity. Education level differentiates people in their ability to access information and the capability to benefit from new knowledge and their income level can differentiate people's accessibility to materials and goods. Occupational status incorporates these components and also adds in benefits arousing from specific jobs such as status, power or privilege (Kunst & Mackenbach, 1995). Alongside these implications, Hasselberg and Laflamme (2003) used a measure of socioeconomic position of the family to clarify causal leads of social disadvantage leading to road traffic injuries in Sweden. Occupation, education and income were related to concepts of measuring different aspects of social stratification. Results highlighted a clear presence of socioeconomic differences in road traffic injuries in young drivers. However, it also demonstrated some aspects of social stratification contributed to road traffic injuries more than others. Specifically, the long term effects of parental social class and education level were significant contributors in road traffic injuries in young people. Children of unskilled workers, self-employed, farmers or whose parents had completed only the compulsory basic education demonstrated a higher risk of involvement in injuries as car drivers. Nevertheless, low disposable income of a household did not increase the risk of road traffic injuries in younger people, suggesting that the disposable income of the household was a relatively less important injury factor among the young adult population.

Other studies in the United States have examined the relationship between race and socioeconomic status (SES) and the risk of adult motor vehicle occupant deaths. In addition to vehicle fatalities, factors such as seatbelt usage and alcohol impairing driving behaviours were investigated. Low per capita income was identified as a determinant of injury mortality (Baker et al., 1992) and thus groups with lower incomes such as the non-Hispanic blacks and Hispanics were at higher risk to motor vehicle injuries than white Americans (Zmud & Acre, 1999). Although black and Hispanic adults travelled less in motor vehicles in comparison to the white population, they were reported to be at greater risk when they travel, not only because of their driving behaviour but also the safety condition of the vehicle. Previous studies have reported that Hispanics and blacks are over-represented in alcohol-related crashes (Chang, Lapham, & Barton, 1996) and particularly black male drivers were at the highest risk of fatality when travelling in a motor vehicle (Braver, 2003). When controlling for the socioeconomic status, low levels of education indicated lower SES levels. A low SES factor was a stronger determinant of motor vehicle crashes than race or Hispanic origin. There was a three-fold increase in vehicle crashes for those without high school degrees for all races and ethnicities combined with the low levels of seatbelt usage were a significant determinant of an outcome to a crash. Alcohol impaired driving and rural residence also increased the incidence of a fatal crash. Lower SES was strongly associated with all of the three risk factors. Non-use of seatbelts was mostly reported among the fatally injured black drivers and high blood alcohol content level was common for Hispanic male driver fatalities which appeared to be significantly affected by the SES as most Hispanic men killed in a crash showed incomplete high school

education. Therefore, from the study, the SES level and ethnicity had a significant consequence towards the level of crash incidence.

Much recent literature in the road safety area has focused on the association between social factors and traffic injuries (Huguenin, 2005). A theoretical model that studies the influence of social and cultural characteristics on traffic accidents has been developed (Factor, Mahalel, & Yair, 2007). The social-cultural model states that traffic accidents have been incorporated in the social context of driving. Although the environmental characteristics and individual driver behaviour directly influence the possibility of an accident, according to the model, there is the further influence of individual and social cultural characteristics towards driver behaviour. The social-cultural model is based on research that proposes social and cultural factors have influence on the action by forming a behavioural repertoire or tool kit that is comprised of habits, skills, and styles that people utilise to build strategies of action (Swidler, 2001). Thus, it may be possible to assume that different social groups may have different types of risk-taking behaviour hence producing different rates of crash involvements.

Consistent with previous literature, a study found that there were significant group differences in the probability of being involved in a traffic crash (Factor, Mahalel, & Yair, 2008). The rate was higher for males than females, younger than older, for non-Jewish than Jewish, and for Jewish drivers of African or Asian origin than American or European origin. The study demonstrated that the underprivileged groups were the most vulnerable.

In summary, the literature has shown conflicting results for a driver's behaviour in a foreign country. Some studies have shown that foreign-born (particularly Asian-born) drivers were equal or less likely to be involved in a traffic

crash due to their social and cultural context. A lower level of risk taking by these drivers appears to result in lower rates of involvement in motor vehicle crashes. However, other research has found that drivers from a foreign country with different regulations and standards were more at risk of a crash. The farther the drivers were initially from, the greater was their crash risk, especially when they were from a country with an opposite-sided driving convention. Many of the published studies suggest that the higher crash involvement of drivers from other cultural backgrounds may reflect their lower socioeconomic status and level of education rather than their country of birth or ethnicity, per se. The research suggests that there is a need to adjust current road safety practices to facilitate adaptation to local conditions by drivers from overseas. One approach to achieving this would be educational programs and initiatives to provide tourists and other foreign-born residents with the knowledge and skills to generate a safer driving environment for the public.

2.3 The Novice Driver Crash Problem

Motor vehicle crashes are the leading cause of fatality and injury among young people and novice drivers who are 25 years or younger are disproportionately involved in crashes (Elvik, 2010). Both inexperience and immaturity have been recognised as the prominent reasons for the higher crash rates of younger drivers (Ferguson, 2003).

Across the OECD countries, 15 to 24 year olds comprise 18% of the population but one quarter of all crash fatalities (Department of Infrastructure and Regional Development, Bureau of Infrastructure, Transport and Regional Economics, 2013). Likewise, in Australia, people aged 17 to 25 comprise only 13% of the Australian population but they account for over 24% of road fatalities. Crashes are more likely to occur during the night and on weekends and involve small, older cars

that are recognised to be less safe. Carrying two or more young passengers has been found to increase the risk of crashes among young novice drivers by 16 times (Elliott et al., 2000; Lam et al., 2003). Persons aged 15 to 24 years are overrepresented in car accidents around the world (Doherty, Andrey, & MacGregor, 1998).

Young novice lack driving skills and experience in distinguishing dangerous situations. In comparison to older, more experienced drivers, they are more willing to take risks, such as speeding and not wearing seatbelts (Hedlund, Shults, & Compton, 2003). Various replicated studies have displayed these crashes are influenced by numerous driver, journey, vehicle and passenger variables that are combined and interact together. Younger male drivers have mortality rates that are three times higher than females, whereas novice drivers crash ten times the rate per kilometre travelled than experienced drivers (Lam, 2003; QLD Transport, 2009).

Driving can be particularly dangerous during the first year of licensure with elevated crash rates within the first months of independent driving. This rate declines steeply within the first six months and then more slowly for the next few years. Furthermore, after 18 months of licensure, teenagers' crash involvement is still shown to be three times that of their parents (Lee et al., 2011). Complex skilled behaviour is obtained only through experience (Simons-Morton, 2007). For a driver to be competent, the ability to anticipate traffic situations is an important aspect. This ability has been commonly referred to as hazard perception that has been measured by various different methods (Sagberg & Bjornskau, 2006). Research has shown that these changes in rates could be attributed to an increase in skills from either experience or maturity due to a decline in the influence of external lifestyle factors, such as sensation seeking (Mayhew & Simpson, 1990).

2.3.1 Young drivers and ethnicity

In New Zealand the differences in driving behaviour amongst Asians and local residents were observed (Rasanathan et al., 2008). New Zealand has had a rapid growth in Asian population and there have been studies that showed significant differences in the occurrence of injuries within the different ethnic groups. Socio-economic status, exposure to dangerous environments and risk behaviours were the main factors that influenced these differences. The results showed that only a small proportion of Asian New Zealand students were exposed to risky driving behaviours. Many of these risky behaviours were typical among the young New Zealand population and when compared with different ethnic backgrounds, Indian and particularly Chinese students were less likely to engage in these behaviours than New Zealand students. Furthermore, there was a strong dose-response effect in relation to the duration of residence. Overall, recent migrants who had been in New Zealand less than or equal to 5 years were less likely to engage in risky behaviours compared to overseas born residents who resided longer than 5 years with the exception being seatbelt usage. Hence in general, specific ethnicity, especially being of Asian descent, did not encourage more risk-taking behaviour.

Similarly, an Australian study reviewed the driving behaviours of young Asian-born drivers in comparison to the Australian-born drivers (Boufous et al., 2010). The results showed that young people in Australia who were born in Asian countries were less likely to engage in risky driving behaviours and had only half the risk of being involved in a vehicle crash than young Australian-born drivers. The results also suggested that Asian youths were less likely to engage in risk-taking behaviours compared to other ethnic youths.

2.3.2 Graduated driver licensing system

The most common approach to reduce the crash involvement of young novice drivers has been to develop a structured licensing system, with learner, restricted (variously termed Provisional, Probationary, Intermediate or Restricted) and open licence stages and accompanying restrictions (Beanland et al., 2013). The Provisional licence was first introduced during the 1960s in the states of Victoria and New South Wales in Australia (McKnight & Peck, 2003). In the 1970s, the National Highway Traffic Safety Administration (NHTSA) in United States researched the threats of novice drivers and hence developed a three stage licensing process, which is now generally known as the graduated driver licensing (GDL) system (Croke & Wilson, 1977). The rationale for this staged approach is that novice drivers will develop driving skills by gaining experience under lower risk situations, thereby reducing the likelihood of novice driver crashes.

The system was first adopted by the State of Maryland in 1978 where a Provisional licence allowed unsupervised driving but required a period of parent-guided instruction, night-time driving restriction, and early intervention for traffic violators and a full licence only after the period without any violation. Different versions of GDL were introduced in California in 1983 and New Zealand in 1987. However, it was not until the 1990s that the system became widely accepted throughout North America and Europe.

In the first phase, young drivers typically gain supervised driving experience on a Learner's driving permit. While there are no consistent practices worldwide, many jurisdictions require that the permit be held for a minimum of six months and that at least 50 hours of supervised driving occur before obtaining a Provisional licence. The initial research supporting the requirement for a minimum number of

hours of supervised driving was in Sweden by Gregersen et al. (2000) who observed the outcomes of the new law where the Learner permit age from 17.5 years was lowered to 16.5. However, this was only permitted if those wanting to drive earlier were supervised by a driving school instructor or by an adult who was 24 years of age who had obtained an instructor's permit. The licensing age remained at 18 years. The results showed that those who started early accumulated 2.5 times more driving hours before obtaining a full licence and had 24% fewer crashes than those starting to drive at 17.5 years of age.

In the United States, a study compared the effectiveness of the graduated licensing system within different states (Shope & Molnar, 2003). In Florida, there was an overall 9% reduction in crashes for 15 to 17 year olds from 1995 to 1997. The reduction was greatest among 15 year olds with an 18% reduction. There were larger reductions among the white population than the non-white teens and urban rather than rural drivers. In Michigan, the risk of being involved in an accident in 1999 was lowered by 25% compared to 1996. In Pennsylvania, after the introduction of the graduated licensing system, Nissley (2001) reported a 27% reduction in crashes, a third less injuries and 58% fewer fatalities for 16-year-old drivers. Overall, the findings reported that all the states identified had reductions in crash involvement among young novice drivers after the introduction of the graduated licensing system.

For Australia, after the introduction of the GDL system in 1987, the results showed a substantial reduction in car crash injuries among all ages. Queensland Department of Transport and Main Roads extensively modified the GDL system in 2007. After the introduction of the new legislation, in 2010 there were 63 fatalities involving young drivers or riders (aged 17 to 24) which were 25.3% of the Queensland road toll for the same period. This was 29 fatalities less than the previous

year and 50 fatalities less than the average for three years prior to the change in the system (Queensland Government, Department of Transport and Main Roads, 2012).

Research has shown that the GDL program was also effective for older novice drivers. Evaluations have reported that GDL reduced crashes among drivers of all ages (Begg & Stephenson, 2003). In addition, the study suggested that drivers who began driving under the GDL system had lower crash rates in the later years in comparison to similar aged drivers who did not pass through the GDL system. Hence, in general the effectiveness of GDL is shown to be positive. From the evaluations, it is clear that the GDL does reduce crashes in addition to injuries and fatalities of young novice drivers. Teenager crashes, particularly for the 16-year-old category were significantly reduced after the introduction of the GDL system. In summary, according to Shope (2007), it can be concluded that although the GDL system differs across jurisdictions, the young drivers' crash risk has been reduced by approximately 20 to 40%.

Rather than educating individuals, the GDL policy establishes a safe, real-world learning environment in which the drivers will learn through exposure during the initial months of driving to reduce the novice crash rates (Foss, 2007). Only a limited amount is known regarding the reasons for the safety benefits from GDL, whether the system actually produces safer driving or whether the benefits are results from delays in licensing and reductions in the amount of driving. In addition, the risks associated with youth and inexperience cannot be eliminated. Thus, the GDL system may need to be revised and developed to provide more necessary protective restrictions for novice drivers. Methods for young drivers to genuinely comply with the road regulations and to enhance their driving skills need to be investigated and developed. Nevertheless, at present, the graduated driver licensing system has proved

to be an effective countermeasure to reduce novice driver related crashes through a combination of restrictions and guided experience.

2.3.3 Research findings on evaluating young driver behaviour

As the risky driving behaviour of young drivers has been consistently found to be a contributor to traffic crashes, researchers have developed an instrument to measure this risky driving behaviour (Scott-Parker et al., 2012). One particular instrument has been specifically developed to measure the risky driving behaviours of young novice drivers, which is called the Behaviour of Young Novice Drivers Scale (BYNDS) (Scott-Parker, Watson, & King, 2010).

The BYNDS was used to measure the levels of compliance to the GDL requirements and general road rules by young Learner and Provisional drivers (Scott-Parker et al., 2012). A majority reported compliance to the GDL requirements and road rules on their Learner licence but considerable proportions reporting speeding during their Learner stage. The level of compliance was lower during the Provisional phase, in particular with speeding, as the drivers are able to drive independently. Self-reported speeding was more common for drivers licensed at a younger age, in a relationship with a partner, driving unsupervised, having inaccurate logbook entries and speeding during their Learner phase. Furthermore, novice drivers reported modelling their parents' driving behaviour and hence parents had a critical role in regulating novice driving. In addition, Learners who did not speak English as their first language were more likely to report logbook inaccuracies which suggested that the importance of the GDL requirements needs to be effectively communicated in the licensing resources for non-English speaking drivers.

2.3.4 Australian licensing system

All states and territories have the graduated licensing system that is established with a Learner period and a Provisional period that gives the driver more experience and freedom than the prior Learner stage. For the last decade, there have been changes in the design of the system in most of the jurisdictions and this is still continuing. Across the jurisdictions, there are variations in the conditions for Learner and Provisional period. Nevertheless, the Learner period is generally approved from the minimum age of 16 years with the Blood Alcohol Content (BAC) limit of zero. Similarly there are variations with the Provisional licence period but most have two stages (P1 and P2) with some restrictions on vehicle travel speed, use of high-powered vehicles, restriction of peer passengers and night-time travel with zero BAC limit. There have been significant reductions in young driver road fatalities over the past decade (up to 2012) where there has been a faster decrease in the last half in comparison to the first half of the decade. Nonetheless the rate of death per population for young adults (17 to 24 years) remains more than 50% higher than the general population (Department of Infrastructure and Regional Development, Bureau of Infrastructure, Transport and Regional Economics, 2013).

2.3.5 Licensing system for foreign-born drivers

As previously explained, the effectiveness of GDL system varies among different groups of young novice drivers. Romano, Fell, and Voas (2011) examined whether the GDL system effects were equal in the different ethnic groups of young drivers in the United States. Their results showed the reductions in fatal crashes associated with GDL were largest for young White drivers, followed by African-Americans and Asians, and the reduction for Hispanics was not significant. This supports the findings of a study conducted throughout the United States by Shope

and Molnar (2003) which reported greater crash reductions in novice drivers among the white population than the non-white teens and urban rather than rural drivers. Therefore, the following research was conducted to investigate the driver licensing experience and its perceived effect on safety with a foreign-born population, focusing on the Korean Australians for this study.

2.4 Korean-Australian Background

Cultural differentiation exists between different ethnicities and there are distinct characteristics in the Korean population, which will be explained in the following pages. The dimension of individualism and collectivism is greatly displayed between Western and non-Western cultures especially (Markus & Kitayama, 1991), South Korea is ranked 43rd in individualism whereas the United States was ranked as the highest of 50 countries (Hofstede, 2001). Studies have reported that individualistic cultural values are associated with young age, university education, residents of Seoul metropolitan area and employed in large companies whereas collectivistic values still existed among the older Koreans living in rural areas or areas outside Seoul with lower levels of education (Ahn, 1999). Contemporary Korean university systems and the societal structure have adopted many features from the U.S. hence the transition to university involves major cultural adaptation from collectivist to individualistic culture. Nevertheless at the same time, collectivistic values do still remain in order to preserve harmony within their families and peer groups (Cho, Mallinckrodt, & Yune, 2010).

This Korean-born population in Australia increased six-fold from 1460 in 1976 to 9290 by 1986. In later years, there has been a significant increase in arrivals with 1400 Koreans arriving each year under the Skilled and Business Migration Class categories. The 2001 Australian Census reported 38,840 South-Korean born

residents which was almost double the population reported in 1991. They comprised 0.9% of the total foreign-born population. In the 2006 Census, 52,760 Korea-born residents were reported which was a 35.8% increase in comparison to the 2001 Census, and by 2011 it recorded 74,538 South Korean-born people in Australia. In terms of the distribution by states and territories, New South Wales had the largest reporting 41,819 (56.1%) Korean-born residents followed by Queensland with the second largest Korean population of any of the Australian states and territories 12,552 (16.8%), followed by Victoria 10,192 (13.7%), Western Australia 4098 (5.5%), South Australia 3399 (4.6%), ACT 1559 (1.7%), Tasmania 627 (0.8%) and Northern Territory 292 (0.4%) (Department of Immigration and Citizenship, 2011).

In 2011, the median age of Korean-born residents was 32 years compared with 45 years for all foreign-born residents and 37 years for the total Australian population. The main language that was spoken at home was Korean for 89.3%, English for 9.3% and 0.5% did not state their language. For those who spoke a language other than English at home, 65.1% reported that they spoke English 'very well' or 'well' whereas 33.5% reported they spoke English 'not well' or 'not at all'.

According to the 2011 Census, the median weekly income for Korean-born residents aged 15 years and over was $352 in comparison to $538 for all foreign-born and $597 for all Australian-born residents. The median weekly income for the total Australian population was $577. The 2011 Census reported 59.6% of Korean-born aged 15 years and over had some form of higher non-school qualification compared to 55.9% of Australian population. In total, 47.5% had a Diploma or a higher qualification and 5.5% had Certificate level of qualification. Among South-Korean-born residents aged 15 and over, 16.2% were still attending an educational institution where the corresponding rate for the total Australian population was 8.6%.

Furthermore, the participation rate of Koreans aged 15 and over in the labour force was 58.4% whereas the unemployment rate was 9.3%. The corresponding rates for Australians were 65% and 5.6% respectively. From the 35,224 Koreans who were employed, 53.1% were employed in a skilled managerial, professional or trade occupation where the corresponding rate for the Australian population was 48.4%. Therefore, according to the data, the employment rates and the median weekly income was higher among Australians in comparison to the Koreans. Nonetheless, the data showed that the Koreans reported higher levels of education and also more were employed in higher forms of skilled occupation (Department of Immigration and Citizenship, 2011).

Hence there are clear differences between ethnicities and among the diverse cultures, and Koreans have their own distinctive characteristics within the general Australian population. Whether these differences impact on driving behaviour was explored through the current research.

2.5 Relevant Theories

Three theories are presented here and compared to select the most applicable theory for the research. Experiential learning theory, theory of planned behaviour and Bronfenbrenner's ecological model are outlined in the following sections.

2.5.1 Experiential learning theory

Experiential learning theory is defined as an integrative perspective on learning that occurs through the combination of experience, cognition and behaviour and that learning is a continuous process based on experience (Kolb, 1984). The theory posits that there are four stages of learning: concrete experience (feeling), reflective observation (watching), abstract conceptualisation (thinking) and active experimentation (doing). The learning cycle can begin at any stage; however, it has

to be in this particular sequential order. People progress through the cycle a various number of times during their individual learning cycle (Akella, 2010). Nevertheless, to be most effective, the Learner partakes in new experiences then reflects on the experiences in order to develop informal theories. As a result, the Learner uses these theories to make their own decisions or solve problems (Henson & Hwang, 2002).

The experiential learning theory can be applied to the GDL system as the rationale of the GDL system is to transform novice drivers through gradual experience. As drivers progress through the graduated licensing system, they experience driving under supervision and watching other drivers. Instructors teach them and guide their reflection from their feelings and observations. From their thoughts, with the adequate amount of experience, the drivers can apply their judgment to safe driving. However, while this theory may be well suited to characterising the drivers' learning experience as they progress through the GDL, it does not explicitly incorporate other factors relevant to the current research such as family and cultural background aspects. Hence it was not considered to provide an adequate conceptual framework for the research.

2.5.2 Theory of planned behaviour

Another theory that was explored as a framework for the research is the theory of planned behaviour. The theory of planned behaviour is an extension of the theory of reasoned action (Ajzen & Fishbein, 1980) which, in turn, is an adaptation of Dulany's (1961) theory of propositional control. According to the theory, people's attitude towards a certain behaviour, their subjective norm and their perceived behavioural control affect their behaviour indirectly through their intentions. Attitude refers to one's evaluation of a behaviour which can be favourable or not and the subjective norm expresses the pressure from others to commit the behaviour.

Furthermore, perceived behaviour control is the level of difficulty there would be to carry out the act (Forward, 2009). Finally, the intention is defined as the willingness to perform the behaviour (Warner & Aberg, 2006).

The theory of planned behaviour has been frequently used in traffic safety research to predict drivers' behaviours such as drink driving (Parker et al., 1992), dangerous overtaking (Forward, 1997), close following (Parker et al., 1992) and lane discipline (Parker, Manstead, & Stradling, 1995). Furthermore, the theory of planned behaviour has been used to predict speeding behaviour (Stradling & Parker, 1997). Although this theory has been commonly used to explain drivers' behaviour, the current research will focus on how driving behaviours and attitudes relate to cultural and family backgrounds. While the theory of planned behaviour may be useful for studying driver attitudes, the focus of the planned research on behaviours, rather than intentions, suggests that another theory may provide a better fit to the research aims.

2.5.3 Bronfenbrenner's ecological model

Bronfenbrenner (1977, 1979) proposed an ecological systems theory that has been widely used by developmental psychologists to comprehend individuals in context. In conception, the model has been used to explain setting-level influences and provides a guiding developmental model to explain a range of experiences including adolescent psychological and academic outcomes (Seidman, 1991), developmental risk and protective factors of substance usage (Szapocznik & Coatsworth, 1999), youth activity engagement and family influences on gender development (McHale, Crouter, & Whiteman, 2003; Rose-Krasnor, 2009). Based on Lewin's theory of psychological fields, the ecological environment is visualised as a set of nested structures each inside the other (Bronfenbrenner, 1994). Bronfenbrenner's model proposes five environmental systems that interact in human

development. The lowest level of the structure is the microsystem, followed by the mesosystem, exosystem, macrosystem and finally the chronosystem (see Figure 2.1).

The microsystem is the setting in which the focal individual plays a direct role, experiences and has direct social interactions with others. It comprises a pattern of activities where these relationships, roles and activities are experienced in a face-to-face setting with particular physical, social and symbolic features that allow or inhibit this engagement in an immediate environment. Peer groups, families, schools and workplace make up parts of the microsystem.

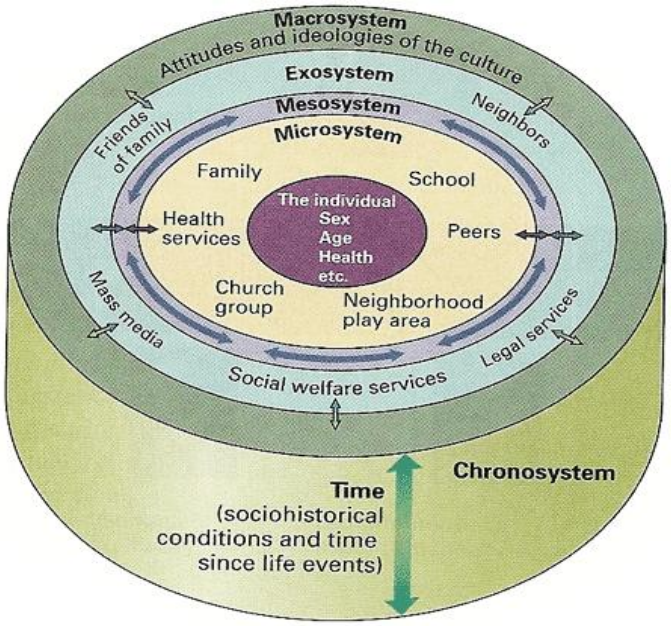

Figure 2.1 Diagram of the Bronfenbrenner's ecological model **(Impact of special needs, n.d.)**

The mesosystem is the level in which multiple microsystems are nested including social interactions within the individual's environments. The mesosystem is the linkage and processes that occur between two or more settings with the developing individual. An example might be the relations between the parent of the developing individual and the teacher in regards to the individual's behaviour. Thus

it represents social interactions of the microsystems of the family and the microsystems of the school.

Exosystems are the nested mesosystems which comprise the linkages and processes that are taking place between two or more settings. The developing individuals are influenced by the settings but do not have direct participation. As an example, exosystems that are likely to affect a developing child may be through community decisions to change the school environment which would have an effect on the microsystems in which children interact.

The macrosystems consist of an overarching pattern of micro-, meso- and exosystems that include the extensive cultural influences or ideologies that result in long-ranging consequences for the developing individual. Macrosystems can also be described as a societal blue-print for a specific culture or subculture. Finally, the system extends its parameter to the third dimension introducing the chronosystem. This system includes the change or consistency over a period of time not only in the characteristics of the person but also through the environment in which that individual lives. Examples can be changes over life in their family structure, socioeconomic status employment, place of residence and their ability in daily life.

Thus this model utilises the five socially organised subsystems to support and explain human development. Therefore to explain the experiences of Korean Australians as they progress through the Australian focused GDL system, Bronfenbrenner's ecological models were considered to be a useful framework as they help explain the reasons for differences in the perception of the GDL system and also their experiences as they advance through the licensing procedure.

2.6 Summary

This chapter has examined the driving experiences and the behaviours of foreign-born drivers and also young novice drivers in addition to the graduated driver licensing system that has been widely adopted internationally.

Previous studies have reported that Asian drivers display less risk-taking behaviour but studies from a wide range of countries have found there were greater crash risks for foreign-born drivers. Studies performed in Australia have shown the same results but there has been little investigation of how foreign-born drivers progress through the graduated licensing system. Hence, as there are differences in driving behaviour between foreign-born drivers and Australian drivers, research is needed into the effectiveness and the experience of the GDL, particularly for foreign-born drivers and whether the system is adequate to suit their needs.

A theory-based approach using the Bronfenbrenner's ecological model is used. This model has been chosen to be the framework as it describes the components of human development and can explain reasons behind differences present in Korean Australians and the Australian-born population.

2.6.1 Research questions

The overall aim of the research is to investigate the experiences of foreign-born drivers as they progress through the GDL system. Hence three key research questions have emerged in relation to their experiences, perceptions and reasons behind their behaviour.

RQ 1. What delays or difficulties do foreign-born novice drivers experience in entry and progression through the GDL system?

The rationale for this question is to explore the drivers' experiences of the GDL system. Information regarding the GDL experience of Korean-born Australians

is collected, focusing on any delays in licensure or difficulties experienced. Particular issues to be examined include whether there are delays in obtaining the Learner licence, whether the requirement of 100 hours of supervised driving recorded in a log book creates more difficulty for this group, if there are difficulties associated with the practical driving test being administered in English and whether there are delays in obtaining a Provisional licence. Furthermore, the progress of Korean Australian drivers through the GDL is investigated and compared with the Australian-born sample to examine the suitability of the GDL system for foreign-born young novice drivers in Australia.

RQ 2. What are the attitudes of the foreign-born novice drivers and their parents towards GDL?

Continuing from the previous research question, this question investigates the attitude of the foreign-born novice drivers and their parents to the GDL system. Additionally the opinions and reflections of the foreign-born drivers on methods to enhance the current GDL system to increase road safety for the broader population are examined.

RQ 3. What are the driving behaviours of foreign-born novice drivers?

The driving behaviours of Korean Australian novice drivers are investigated and the influences of family, socioeconomic and environmental factors are examined. These are then compared with the driving behaviours and attitudes of Australian-born drivers from previous studies.

Chapter 3 – Study 1: Focus Groups with Novice Drivers and Parents

3.1 Introductory Comments

This chapter reports the qualitative study conducted with young Korean Australian drivers and Korean Australian parents of novice drivers. Focus group discussions were utilised in this current study to prepare for the later quantitative data collection. The following chapter explains the rationale and also the methods, results, discussions and conclusion from this study. A paper based on this study was presented at the 2013 Road Safety Research, Policing and Education Conference (Oh, Haworth, & King, 2013).

3.2 Study Aims and Rationale

The aim of this study was to better understand the experience of young foreign-born drivers, especially Korean Australians, as they progress through Australian GDL systems. This chapter explains the qualitative process that was used to elicit experiences and attitudes relating to the current GDL system. A focus group discussion method was selected as little is known about the socioeconomic, cultural and personal determinants of the driving experience of young drivers and also the parents whose children are progressing through the Australian GDL systems. Thus the focus group discussions provide a method to gather in depth information about these factors from the relevant groups of participants. Bronfenbrenner's ecological model was used to structure the discussion prompts and the specific issues outlined below are addressed in the discussion sessions. The discussions were conducted with two separate categories of participants, young drivers and parents.

1. *What delays or difficulties do young foreign-born Australians experience in entry and progression through the GDL system?*

The young Korean Australian drivers discussed their purpose for obtaining their drivers' licence and the parents also discussed similar topics regarding the rationale of their children obtaining their drivers' licence. Participants commented about their experiences of supervised driving and whether there were any distinctions from the Australian population. In particular, topics on the age of licensure for young Korean Australian drivers, whether there were any delays and the reasons behind it were considered during the discussions.

Issues such as the accuracy of the logbook entry and perceptions towards the 100 hours of supervision were discussed. Furthermore, the availability of supervision was considered throughout the discussions with both the parents and young novice drivers. By applying the ecological model, the different responses between the two groups were reviewed as there are variations in their thoughts and perceptions. Furthermore, their experiences in practical driving were discussed.

2. *What are the attitudes of the foreign-born novice drivers and their parents towards GDL?*

There have been studies that had reported the effectiveness of the GDL system but there is limited literature addressing the young drivers' and the parents' perceptions towards the effectiveness of the current GDL system. Hence this topic investigated the overall attitude of the foreign-born population including the young drivers and the parents to the GDL system. Furthermore, as foreign-born drivers, methods to modify the current GDL system were discussed for it to have an effect on the larger population.

3. *What are the driving behaviours of foreign-born novice drivers?*

The driving behaviours of young Korean Australians were discussed and compared with perceived driving behaviours of young Australian drivers. This allowed the effect of cultural, socioeconomic and environmental differences between foreign-born and Australian-born drivers to be investigated.

This study was conducted to prepare for the development of a quantitative questionnaire for Study 2. The focus group discussions provided a better understanding of the variables that related to the experience and views towards the GDL system in relation to the Bronfenbrenner's ecological model. Hence this facilitated the development of the questionnaire for Study 2.

3.3 Methods

3.3.1 Study design

The first two focus group sessions discussed the young novice drivers' experiences of the Queensland GDL system and their perceptions of its structure and effectiveness. Furthermore, issues were raised about the differences between the driving behaviours of Australian-born and Korean Australian drivers. This process is described in detail throughout this chapter.

The third focus group session involved the parents of young novice drivers who held at least a Queensland Learner's licence. They too discussed their experiences of the GDL system as the supervising parent of the young driver and also their perceptions of its effectiveness and their perceptions of the need for such a system. It was expected that there would be differences in comments between the parents and the young novice drivers and that some parents may not have a thorough knowledge of the GDL system which would lead to problems in supervision.

Participants were approached face-to-face from Korean community churches located across the Brisbane and Gold Coast area. These discussion sessions were recorded for transcription purposes only.

The purpose of these discussions was not only to understand the differences present in the young driving population of Australians and Korean Australians, but also to investigate the parents' perceptions of the safety and effectiveness of the GDL system.

3.3.2 Participants

A total of 22 people participated in three focus group sessions. Two focus groups involved novice drivers aged between 16 to 25 years who held at least a Queensland Learner's licence. The third focus group comprised parents whose children held at least a Queensland Learner's licence. They were not necessarily the parents of the young drivers in the other focus groups. No specific lengths of stay in Australia were required for the participants.

The young drivers included eight females and six males with a mean age of 21.4 years, ranging from 16 to 25 years of age. Their range of stay in Australia varied between less than two years to 21 years with a mean of 9.9 years. The participants with less than two years of stay were categorised as 'recently arrived' and participants with more than two years of stay were categorised as 'long term resident'. From the 14 young drivers, only one participant was categorised as short term with less than two years of stay in Australia.

The eight parents were five females and three males who had a mean age of 49.8 years, which ranged from 48 to 53 years of age. Their length of stay in Australia was substantially longer than the novice drivers, ranging from six to 22 years with a mean of 14.1 years. Therefore, all the parents were categorised as long term residents.

3.3.3 Materials

The focus group discussions were constructed around Bronfenbrenner's ecological model. The prompts used as a guide for the discussion with the young drivers are shown below.

1. What factors led the young drivers to get the Learner's licence and what factors made it more difficult to get the Learner's licence?
2. Who did most of the supervision during the Learner stage and what had influenced this?
3. Explain your experience with logbook entries and 100 hours of supervision.
4. How was your practical driving experience and were there any issues in receiving supervision? If so, how did you manage to cope with this?
5. What are your views of the current GDL system in Queensland?
6. What are your thoughts on the differences between Australian-born drivers and Korean Australian drivers and the effects of different driving conditions?

The following prompts were used as a guide for discussion with the parental group.

1. What factors led the young drivers to get the Learner's licence and what factors made it more difficult to get the Learner's licence?
2. Who did most of the supervision during the Learner stage and what had influenced this?
3. What are your thoughts on the 100 hours of supervision and explain your child's experience with logbook entry and supervised driving practice
4. What are your thoughts on the differences between Australian-born drivers and Korean Australian drivers and the effects of different driving conditions?
5. What are your thoughts of your child obtaining their licensure at their age?

3.3.4 Procedure

The focus groups were organised at a Korean community church on the Gold Coast during May and June 2013. The discussions were conducted on topics in relation to the experiences during the process of obtaining a licence that were associated with cultural and personal issues. The groups discussed each topic with the moderator administering the session. Key issues such as their perceptions of the aims and fairness of the practical driving test were also discussed. Furthermore, their experiences as young drivers or their views as parents on the licensing procedure were considered as well as suggestions to enhance the efficiency of the current licensing system. With the parental group, the Korean language was used during the sessions as all the participants were comfortable with speaking Korean however, with the young driver group, a mixture of Korean and English was used as they preferred using both languages.

The discussion began by the moderator asking questions in relation to the process of obtaining the Learner's licence. The reason for obtaining it and any difficulties experienced during the process of obtaining the licence were discussed.

Each of the focus group sessions ran for approximately 90 minutes and was moderated by the principal researcher and audio taped for later transcription. The participants were informed that participation was voluntary and their responses would remain anonymous. The QUT Human Research Ethics Committee approved the study in April 2013 (Approval Number 1300000178).

3.3.5 Data analysis

Conceptual content analysis was conducted to analyse the information that was provided from the participants. From the focus group basis questions, discussions were freely conducted with the participants. Once all the ideas had been

identified and discussed, the information was gathered to address the three major research questions identified earlier.

For the confidentiality and anonymity of the participants, the response quotes are documented without identifiable information except for their gender, licence status and their category of length of stay in Australia.

3.4 Results

The participants' comments from focus group discussion sessions are reported below. Overall, the parental group and the young driver group had similar views on the effectiveness and the safety of the Queensland GDL, but there were some disagreements on the need for some of the restrictions.

3.4.1 Delays and other factors affecting licensing

Among the young novice drivers, six participants obtained their Learner's licence at the minimum legal age of 16 years whereas the other eight obtained their licence after they had graduated from secondary school (when many Queensland students are 17 years of age). The participants reported, due to parents' expectations, having achieved high academic results in high school, which is common for families of Asian background, and this may have contributed to this delay in licensure.

The most shared reported reason for licensure was for self-mobility due to inadequate public transportation in Queensland. The young novice drivers believed there were restrictions on relying only on public transport and thus obtaining the Learner's licence at 16 years would allow them to be fully licensed to drive as soon as possible.

> *The transportation is bad in Australia. As I grow older I need to obtain a licence to move around places without my parents' help. Regardless of*

whether I want it or not, it is a necessary thing that we need. (Long term resident, female Learner)

The parents shared the same perspective that using only public transportation can be restrictive for travelling to necessary places at the right time; hence their children obtaining their licence was necessary.

To be free from pickups. (Mother, long term resident)

Additionally, young drivers perceived that it was a social obligation to have obtained a driver's licence. The participants reported that most peers would obtain their licence at the minimum legal age; hence when possible they too went for the licence as they turned 16 years of age.

It's a social obligation. My friends drive around so I don't want to fall behind. (Long term resident, female Open driver)

People around were all driving on their own. Also being able to drive was essential in Australia. (Long term resident, female Open driver)

3.4.2 Parental perceptions regarding licensing age

Several parents suggested delaying the time of licensure may be a better prevention method to the young novice driver problem than GDL. Comments were made that licensing young drivers at an early age may result in overconfidence and careless driving. On the other hand, licensing at an older age would mean greater knowledge of risks, increasing the ability to detect danger on the roads. Parents believed that delayed licensure was a safer approach to increasing road safety, particularly for young drivers.

I think delaying the licensure wouldn't be a major problem. The perception of safety is lower for young adolescents. I believe their detection of risk would be increased when they are older. (Father, long term resident, Open driver)

I think young children can drive without care and have too much self-confidence. So I believe the older the better for driving. (Mother, long term resident, Open driver).

On the contrary, there were other parents who thought that 16 years was an appropriate time to begin driving with sufficient supervised driving practice.

I think 16 years is reasonable but the supervision period is definitely necessary. (Mother, long term resident, Open driver).

3.4.3 Supervising drivers

Most of the parental responses mentioned mothers being the primary supervisor for their children. As immigrants to Australia, many fathers were working long hours to support their family. Hence there was a limited amount of time when they were available to supervise their children. Thus, as fathers were busy with daily work, it was common for mothers to provide most supervision.

I did all of the supervision. Father was too busy with work. (Mother, long term resident, Open driver)

For both the child, I did the supervision and my first child did 3 or 4 driving lessons but second child hasn't had a lesson yet. I did the most supervision because I spent most times with my children. (Mother, long term resident, Open driver)

These responses were common for those young drivers living with their family. However, there were issues of supervision for those drivers who were overseas students living away from home. Due to the high cost of private driving

school lessons, the young drivers without parents for supervision had experienced difficulty reaching the 100 hours of supervised driving.

> *As an overseas student, I didn't have family members to give me supervision. There were difficulties filling-up hours with driving lessons hence it was hard for me to reach 100 hours.* (Long term resident, male P2 driver)

3.4.4 Logbook entries and supervised driving requirements

When discussing the topic of logbook entries and its accuracy, many young drivers recalled inaccurate entries. Only minor amounts of hours were reported to be falsified; with a pattern of increasing kilometres driven and rounding up the minutes supervised. Young drivers mentioned that their parents insisted it was important for them to keep the rules, especially during the Learner period. Nonetheless, many young novice drivers perceived that their parents thought 100 hours of supervised driving was too long. They discussed that as there was a limited amount of distance travelled for each family, this made 100 hours of driving a difficult requirement to comply with. Thus for this reason, although young novices believed that it was important to follow the regulations, high noncompliance rates were reported and some parents had allowed their children to falsify the records to some extent.

> *My parents believed 100 hours were too much as my high school was 7 minutes walking distance from home. We would only travel short distances; filling up 100 hours was difficult. So time and money was a burden especially the cost of driving instructors.* (Long term resident, female Learner)

This was true for some parents as they did not understand the reasons behind supervised driving. Hence, they had signed the logbook hours without full knowledge of the requirements.

> *I only signed so I'm not sure about 100% accuracy but I think it's almost correct.* (Mother, long term resident, Open driver)

In addition, there were some special circumstances, for example where the young driver was living in Australia with his mother only and she was critically ill with cancer. Hence he reported that his mother was not able to fully supervise him for 100 hours and thus he drove unsupervised and falsified logbook records.

> *My mother was very ill with cancer. So I had to drive myself and had to falsify because it was impossible for me to receive supervision. I ended up increasing the kilometre mileage by 1000 kilometres.* (Long term resident, male, P2 driver)

However, the majority of the parental views of the 100 hours of supervised driving were different to the young novice drivers. The parents indicated that they provided sufficient supervision complying with the requirement hours and also perceived that this regulation was a significant method of developing the skills of young drivers.

> *I think we fulfilled without any falsification and did the driving school towards the end to get triple time. Also did some Brisbane trips from Gold Coast to fulfil hours. I take thorough care but it is difficult to fill hours around residential areas.*(Mother, long term resident, Open driver)
>
> *Although it is difficult at the point in time but I believe it is essential.* (Mother, long term resident, Open driver)
>
> *I am making sure my child does the required hours. We believe that it is essential to his learning to become a safe driver and that by this he is*

learning his first step to be compliant to the law. (Father, long term resident, Open driver)

Of the 14 young drivers, only five had received professional driving lessons from an instructor. Some drivers reported having Korean driving instructors as English was not their first language whilst others that were more fluent with English found having English-speaking instructors to be more comfortable.

Some mentioned that they had easy access to vehicles at home for supervised driving practice. However, as mentioned before, overseas students living away from home reported limited access to vehicles.

> *It was a problem for me to have supervision. I couldn't always receive professional lessons for hours because simply the cost is too high and having to live here by myself, it was hard to get the hours up.* (Long term resident, male, Open driver)

Furthermore, some reported that as parents were busy during the day or were away from home, they experienced difficulties in receiving supervision. A majority of the parents believed that adequate supervision was necessary and important for their child, and the only reason behind a low level of supervision for some families was their lack of availability.

> *There were some problems because I would have my studies and work which meant there was different availability times to my children…I think it is better the longer it is.* (Mother, long term resident)

Those participants who had professional lessons stated that they learnt to drive primarily from the instructors then practised with their family and friends when they were confident to start driving. Residential areas were the initial place to start driving and then they moved on to highways.

> *I was able to practise in variety of situations with the driving instructor, such as large intersections and hill start.* (Recently arrived, male, Open driver)

> *There are lots of roundabouts around my home, so I did lots of practice there and to get to my gym, I had to travel on the highway so did my highway practice by going to gym.* (Long term resident, female, Open driver)

3.4.5 The practical driving test

In regards to the practical driving test, the majority of the young drivers did not mention language barriers as a problem as most of the participants had been in Australia for a substantial length of time. Thus they were sufficiently proficient in English to understand the examiner. Nevertheless, there were some reports of participants who experienced nervousness and anxiety by having an English examiner which led them to perform below their potential. Moreover, there were issues of their family members struggling in their tests due to lack of English competence, particularly for the practical driving test.

> *I was very nervous, stalled once and I was more nervous because I knew the examiner was checking points that I was making mistakes. Also, the test done in English made me nervous too, maybe not performed to my best potential.* (Recently arrived, male, Open driver)

> *My mum can't speak English so she had to study extra harder to understand the written test. Also had to wait for the English translator for the written test but going on the set allocated time was difficult. The biggest problem was with practical test because she couldn't understand the examiner and which also made her very nervous.* (Long term resident, female, Learner)

In addition, there were some perceptions of inconsistency among the examiners. The participants commented that although there are set criteria that need to be successfully accomplished in the test, many participants felt that it really depended on the examiner. Several young drivers reported that some examiners were stricter than others as some reported their minor faults were overlooked whilst there were others who had experienced strict assessment.

> *I think the examiner had pity on me maybe? I think I was lucky to pass with some mistakes.* (Recently arrived, female, Open driver)

> *I think it really depends on the examiner because my older brother did it three times and he said that he had more mistakes on the third go but ended up passing the test. I think there are some biases to the exam depending on the examiner.* (Long term resident, female, Learner)

3.4.6 Opinions of the current GDL system in Queensland

The driver licensing procedure in Korea differs from the Queensland system. First, the applicant must be at least 18 years of age to apply for a licence in Korea and must pass the physical health examination and the written test. Afterwards they progress to a test in which the drivers are examined on a closed course. Once this test is passed, the final practical on-road examination is conducted (Road Traffic Authority, Driver's License Examination Office, 2012). The Korean driver licensing system does not provide gradual progress and the process can be very brief as it does not require minimum amounts of time or supervised practice between the written and practical examinations. Depending on the circumstances, there can be minimal hours of supervised training, and some drivers can progress through the written, driving course and on-road examination in periods of one day to one month and become fully licensed.

Therefore, through the focus groups, comments have been raised that suggested the Korean licensing system is too short to be able to fully educate and provide skills through experience to the new novice drivers.

Many parents and young drivers agreed on the positive features of the Queensland GDL system. Participants from both groups commended the system and responded that the system was developed with precision and thoroughness. Moreover, participants perceived that the Australian system supported novice drivers to gain confidence and skills to be more competent to drive when unsupervised by incorporating gradual progress and time to gain skills progressively within the licensing system.

> *The tests are strict and precise which actually tests the drivers for their driving abilities in detail for various driving situations.* (Long term resident, female, Open driver)

> *As there is sufficient practice, you have fewer worries when you are licensed. In Korea it's different because you still feel you're not prepared to drive on your own even when you have been licensed.* (Recently arrived, male, Open driver)

Nevertheless, young drivers raised issues in relation to 100 hours of supervised driving. They agreed that supervised driving practice is an essential component of the system but were not sure whether the length of 100 hours was necessary. Some participants thought 50 hours of supervised driving would be sufficient. On the other hand, all of the parents commented that although 100 hours of supervised driving can be lengthy during the process, they all perceived that the

required time was an essential factor for their children. They believed the longer training hours would be more beneficial to their children's safety in the long term. Parents acknowledged the required time was reasonable for their children to acquire the necessary skills for safe driving and also to learn defensive driving measures if risk was present from another party.

> *Although it is difficult at the point in time but I believe it is essential.* (Mother, long term resident)

> *I think some may think it's too short and others may think it's too long. But I personally think that the longer the better as driving is directly associated to life.* (Mother, long term resident)

Therefore the perception of young drivers, where they thought their parents did not agree with the requirement of 100 hours of supervision, was not verified by the responses of the parental group. Instead the parents shared positive support towards the system which was the opposite opinion to the young drivers.

The age of licensure was also discussed with both groups of participants. One young driver and the majority of the parents questioned whether it was necessary to begin driving at 16 years even under supervision, believing it may be too young to start driving. Parents perceived that their children may not be sufficiently mature to react appropriately in dangerous situations and that risky driving behaviours can result from overconfidence and lack of perception of risk.

> *Why does the licensing program begin so early at age of 16 years? To increase the safety delaying the starting age of licensure may be a method. In*

Korea, you can apply for the licence at the age of 18 years. (Recently arrived, male, Open driver)

I believe that although young drivers are quick in reaction these days, but I believe they are still too young to be fully capable of understanding and initialising actions during the times of dangerous risks. (Mother, long term resident, Open driver)

I think the minimum age for obtaining a licence is too young in Australia. In Korea it is 18 years, but I think it's too young at 16 to obtain licence. The crash rates of young drivers are too high. (Long term resident, male, Open driver)

When questioned about personal opinions of how to enhance the efficiency of the current system, most parents were satisfied with the current procedure of the GDL system. However, there were some points raised where it can be improved by providing the regulations and procedures in the Korean language. Although the Korean Australian young drivers were very confident with their English levels, many parents reported that they had language barriers and hence if there were information available in Korean this would enable them to be more supportive of the system and thus with more in depth knowledge able to increase compliance rates.

It's difficult because parents such as non-English parents to thoroughly understand the system. I think it would be helpful to have booklets translated into foreign languages. (Mother, long term resident, Open driver)

However, when the same topics were discussed with young drivers, in general their views were related to driving under supervision. Issues were raised about their difficulties in reaching 100 hours in particular when they did not have

easy access to vehicles or supervisors. As mentioned earlier, some overseas students commented that increasing the number of hours of professional driver hours that could be counted as triple hours would make it easier to reach the 100 hours requirement. This might reduce the burden of the financial cost of supervision and also reduce falsifying logbook entries. Others suggested reducing the supervision to 50 hours would actually increase the accuracy and compliance rates as it provides stronger confidence and motivation as an easy and possible regulation to be accomplished.

> *For overseas students, it's difficult to receive supervision other than instructors, thus maybe increasing the hours of instructor advantage above 10 hours would help in complying with the 100 hours supervision requirement.* (Long term resident, male, Open driver)
>
> *Lowering the supervision hours to 50 might actually reduce people falsifying and increase fulfilling their rules. It's more likely to follow regulations that are easier to be accomplished.* (Long term resident, female, Learner driver)

3.4.7 Opinions on the differences between Australian-born drivers and Korean Australian drivers

Both parents and young drivers discussed their perceptions of the risk-taking behaviour of Australian and Korean Australian drivers. Some believed that because the licensing procedure in Australia is more comprehensive requiring more time and practice, young Australian drivers should have better skills that will allow them to cope with unexpected dangerous situations. However they were not sure whether the comprehensive nature of the licensing system in Australia would reduce risk-taking behaviours.

I think the professional teachings during the Learner stage are more detailed and skilful in Australia. So I believe the ability to drive is more highly efficient in Australia than Korea. But I'm not sure about the risk-taking behaviours. (Father, long term resident, Open driver)

The majority of the participants perceived that on average young Korean Australians were safer and better drivers than Australian drivers. To support this perception, they noted that Korean culture has the tendency to be interdependently structured demanding high compliance to societal rules and in particular to the parents. Families would typically encourage their children to follow the rules and be obedient to elders which may be the reasons behind less risk-taking behaviours. Furthermore, the perceived lower rate of vehicle ownership for Korean Australian drivers would have had an effect on this perception. Participants believed that as the young Korean Australian drivers use their parents' vehicle more often, this would have an impact on reducing dangerous driving behaviours.

I think Korean Australians are much safer when referring to friends and family. The way we are raised, I think Korean parents are stricter, so I think we are safer drivers. (Long term resident, female, Learner driver)

I think Asian drivers are safer than Australian drivers as young Australians drive in aggressive manner than Asians as they buy their own second-hand cars but Asians tend to drive parent's vehicle. (Mother, long term resident, Open driver)

Young Australians tend to buy cheaper cars but most of us use family cars so we tend to be more careful with it and have more awareness while driving. (Long term resident, female, Open driver)

However some did express there may be differences with the minority group within Korean Australians who are in Australia on a ‘working holiday’ visa. Their purpose for visiting Australia is to work and thus many do purchase inexpensive vehicles solely for transportation. Hence for this case, there were thoughts that this subgroup may have the tendency to drive in a risky manner. Issues related to alcohol impaired driving were raised where many participants perceived that although drink driving is not common for young drivers that reside with their families, it may be more common among Korean Australians on a working holiday visa. Other than that, most participants reported positive views of young Korean Australian drivers in comparison to young Australian drivers.

> *We tend to be more careful when we drive. But working holiday visa people come here [and] buy very cheap cars for work. This may lead them to drive in risky manner, but overall in general Koreans tend to be more careful.*
>
> (Short term resident, male, Open driver)

Overall, parents expressed the views that it was safer driving in Australia when compared to similar metropolitan cities in Korea. Parents considered that there were fewer vehicles on the road in Australia and the transport infrastructure was less complicated.

3.5 Discussion

The key topics raised in the focus groups are discussed below in terms of the five levels of Bronfenbrenner’s ecological model in order to better understand the factors underlying experiences and perceptions of the GDL system.

3.5.1 Obtaining a licence

Firstly, when discussing the topic of licensure, the key reason behind obtaining a driver’s licence was from social obligation as an influence from peers and self-mobility. The influence from peers reflects the microsystem level of the

ecological model, as a person is directly under the influence of peers to be motivated to obtain a licence whereas the reasons for self-mobility can be considered to be an influence of the exosystems, as one must obtain a licence due to inadequate public transportation. Nevertheless, licensure can be delayed due to the influence of parents from cultural backgrounds that prioritise academic study over driving, which is a factor of both the micro and macrosystems as it is dealing with the cultural aspect in addition to the parental influence. Hence the process of a young adolescent to become licensed appears to be influenced by a combination of microsystem, exosystem and macrosystem-related factors.

3.5.2 Supervision and logbook entries

During the licensing procedure there were comments of falsifying logbook entries as 100 hours of supervised driving was a difficult task to meet. The falsification and inaccuracy of the logbook entry may have resulted from a lack of understanding of the importance of supervised driving, particularly with the young driver population. Furthermore, there were instances where there were reports of difficulty in receiving supervision due to socioeconomic and environmental influences within the family. The availability of parents or other family members depended on these surrounding environments. Young drivers living away from their homes or families where their parents were busy with other work duties had difficulties in receiving sufficient supervision and this had an impact on the licensing experience.

Therefore, when applying the Bronfenbrenner's ecological model to explain these behaviours and experiences, the interactions of microsystems and mesosystems are utilised as there are direct influences from peers and family members in addition

to the different cultural beliefs and socioeconomic circumstances of the family which affected the understanding of the licensing procedure.

3.5.3 Practical driving experience

There were issues with supervision hours before the practical driving examination. Whilst there were young drivers who had easy vehicle accessibility and supervisor availability, as mentioned before there were those who had limited access to supervision due to their parents being too busy with work or their living status. Hence, the method to fulfil the requirement was achieved through professional driving lessons which were regarded as a costly method. Nevertheless, although the parents could not provide sufficient supervision, parents all expressed a shared belief in the importance of the supervision and that they would like to provide as much help as they could when possible.

Furthermore, as English was not the first language of the participants, issues related to language barriers were discussed. Some participants expressed problems experienced by participants' relatives as there were difficulties in understanding the practical examiner's direction. However, English was not a major communication difficulty for the Korean Australian novice drivers. Nevertheless, undertaking an examination under their second language elevated their psychological arousal and nervousness which had impacted on their perceived performance.

Further to these language barriers, some considered there was examiner bias as there were some reports suggesting perceptions of inconsistency among the examiners. Several participants described some examiners as being stricter in evaluating than others. Some examiners overlooked minor faults whereas others were very precise when assessing. These experiences may also have been initiated from attributional bias where people are more likely to attribute positive events to

themselves and dismiss the negatives as attributable to others (Heider, 1976; Kelly, 1973). Nevertheless, none of the participants expressed that examiners were deliberately tough or biased against the foreign-born drivers.

3.5.4 Perceptions of the QLD GDL system

Compliance with regulations and completing the required amount of supervised driving practice is essential in increasing the experience and skills required for young novice drivers. Nevertheless, a minority of Korean Australian parents reported that they provided supervision only when there was a necessity to travel for themselves or the young driver. Thus, as there were limited hours of necessity to travel for the family, there were difficulties in meeting the requirement of 100 hours. This outcome can be related to reasons stated above that there may be a lack of understanding of the system which created this noncompliance. These outcomes agree with previous studies that reported greater logbook falsification rates by non-Australian born drivers (Scott-Parker, et al., 2012). In spite of this, the majority of the parental group understood the need to abide by the regulations. Only young drivers reported 100 hours to be excessively long and strenuous whereas parents expressed a strong belief in the importance of the gradual process. The difference in macrosystems for parents and young drivers would have influenced this outcome as there were different views of the same task between parents and young drivers. These differences would have developed from differences in age, experience, knowledge, customs, life-style, culture and education within the two groups. The parents were educated in more authoritarian family backgrounds themselves than the young drivers. Therefore the attitudes towards compliance to rules differed, and with their experience and knowledge the parents had a higher understanding of the benefits of the GDL system than the young drivers.

3.5.5 Differences between Australian and Korean Australian young drivers

These questions can produce in-group bias, where majority of the groups would believe they are better drivers than drivers of other groups (Aronson, Wilson, & Akert, 2010). For this reason the majority of participants from both groups perceived that young Korean drivers were safer and less risky drivers in comparison to young Australian drivers. These perceptions corresponded with findings from previous literature that Asian drivers were less involved in risky driving situations than other native drivers (Boufous et al., 2010). Hence when considered with the study by Scott-Parker et al. (2012) in which non-Australian drivers showed lower compliance to the licensing procedure, it reflects the diversity of origins of non-Australian drivers and demonstrates it is unwise to ignore differences in origin and culture. The differences present in microsystems, mesosystems, exosystems and macrosystems of the participants (including their parents, religion, peers, education, socioeconomic status, values and cultures of the families) are the factors that are likely to have influenced the driving behaviours of the Korean Australians. Furthermore, supporting the findings of earlier studies, participants reported their commitment to academic study, being respectful to parents, and their parents being the primary owner of the vehicle may have been the reasons behind Korean Australians reporting safer driving behaviour (Garcia-España et al., 2009).

3.6 Conclusion

The theoretical framework used to guide the focus group discussions allowed an exploration of differences in experiences and perceptions between Korean Australians and Australian drivers. Different factors of the Bronfenbrenner's ecological model appeared to be relevant for particular behaviours or experiences.

The majority of the participants reported positive attitudes to the current GDL system. They perceived it as being comprehensive and structured by providing sufficient time for novice drivers to learn the skills necessary before becoming fully licensed. Due to factors associated with socio-cultural factors and experiences, the driving behaviour of young Korean Australians was perceived to be safer than young Australians but still needs modifications to the system to increase the compliance rates for foreign-born drivers with the requirements. Also, there are differences in family environments that restrict the young driver from receiving adequate supervision due to lack of supervision availability or limited access to vehicles at home. As it is difficult to complete 100 hours of supervision with professional instructors, other measures need to be implemented to assist those experiencing this difficulty which would increase compliance with the regulations.

Providing English translation of materials about the GDL system to the parents and families would enable the families to have greater understanding of the system and thus facilitate higher compliance when progressing through the system.

There were some limitations to this study as the data was collected from Korean-Australians only. Sampling the Australian population and comparing their experiences and perceptions of the GDL system directly to those of the Korean-Australians might provide a greater strength and reliability to the study. Therefore, in Study 2, Korean samples were investigated through a questionnaire-based method of research regarding their experiences, driving behaviour and factors that might have influenced their experience and then these data were contrasted with the Australian population previously researched by Scott-Parker et al. (2012).

In addition, there was a large variation in the length of stay in Australia for both young novice drivers and the parents. The participants' place of birth was not

asked hence, given their length of stay, some young drivers could have been born in Australia rather than Korea. Hence their views of the GDL system may have differed from those of foreign-born young drivers. In addition, the parents of young drivers who recently migrated to Australia may have different perceptions of the GDL in comparison to parents who resided in Australia for a long period of time with their children born in Australia resulting in limitations of the outcome.

Moreover, this study was conducted using a focus group discussion method, hence there were difficulties in obtaining participants' specific information relating to their cultural and socioeconomic background. To study the association between their cultural and status figures to their experience of the licensing system, further data collection through the questionnaires was conducted that enabled the participants to report in detail about their personal backgrounds such as their education, socioeconomic status and cultural environment in addition to their driving behaviour and licensing experience. In the future, there needs to be closer examination into the reasons behind noncompliance to policies and the development of methods to target this by modifying the GDL system with factors associated to noncompliance behaviours.

Chapter 4 – Study 2: A Survey of the GDL Experience of Korean Australian Novice Drivers

4.1 Introductory Comments

This chapter presents the second study conducted as part of this program of research. An online survey of Korean Australian novice drivers collected information about their progression through the GDL system, their attitudes to GDL and their driving behaviour. The questionnaire items were informed by the results of the focus group discussions in the first study. The questionnaire comprised four major components: questions assessing their basic demographic details; family factors including English fluency and their residential status; parents' current licence status and the availability of supervision during their Learner's stage, in addition to young drivers or parents' perceptions of the effectiveness of GDL; and young drivers' general driving behaviour and perceptions of certain driving behaviours. Self-reported measures of attitudes and driving behaviours were compared with results from the earlier studies of Australian-born novice drivers (Scott-Parker et al., 2012).

4.2 Research Aims and Hypotheses

This study examined all the research questions presented in Chapter 2 but collected information from the novice drivers only, not their parents. For each research question, hypotheses in relation to the expected findings for the Korean young drivers were developed based on the literature and the findings of Study 1. The research questions and their associated hypotheses are presented below.

RQ1. What delays or difficulties do young foreign-born novice drivers experience in entry and progression through the GDL system?

H_1: Korean-born novice drivers will be older when obtaining Learner and Provisional licences.

H_2: Family factors such as not living with parents, parental licensing status and number and availability of vehicles in the household will contribute to difficulties in meeting supervised driving requirements.

H_3: Language difficulties and financial barriers will affect the attitudes to, or success in, the practical driving test.

These hypotheses focus on the microsystems level of the Bronfenbrenner's ecological model. Family factors include the English ability of the parents in addition to the participants' living and residential status. Furthermore, family customs and traditions make up the family factors of a young driver. From the focus group discussions, Study 1 indicated that young drivers born overseas, and particularly those living away from home, tended to experience difficulty in fulfilling the Learner stage requirements.

RQ2. What are the attitudes of the foreign-born novice drivers and their parents towards GDL?

H_4: Novice drivers born in a country with a simple licensing system might believe the GDL system in Australia is unnecessarily complex.

H_5: Korean-born novice drivers will report that the supervised driving requirements are too onerous.

This follows from the previous hypothesis as family backgrounds not only affect the experiences from the Learner's stage but would have an overall influence over the views and attitudes to the GDL system. Studies have reported that there were significant differences in the effectiveness of the GDL system among different ethnic groups (Romano et al., 2011). Moreover, studies have reported that drivers'

intention to comply with the road regulations were influenced by norms and perceived behaviour control in addition to the personality characteristics, with their sense of themselves influencing their driving style (Elliott et al., 2003). Hence, the distinct family environments that influence the characteristics of the individual are expected to influence their driving experience and perceptions of the GDL system in Australia.

RQ3. What are the driving behaviours of foreign-born novice drivers?

H_6: Korean-born novice drivers will report low levels of risky driving behaviours because of their greater respect for authority.

H_7: Korean-born novice drivers will be influenced more strongly by parents than peers.

H_8: The levels of risky driving behaviour will increase as novices move from the Learner to the Provisional stage.

Previous studies have examined the differences in driving behaviours among individuals and the factors that may influence such outcomes. Among them, studies have found that attitudes, skills and factors affecting the risks of the driver can be associated with cultural differences (Leviakangas, 1998). Social behaviour, cognitive processes and attitudes are also influenced by cultural backgrounds, with some subjects expressing different levels of sense of control and aggressiveness that influence their driving behaviour (Berry et al., 1992). Therefore, the young drivers' socioeconomic status, cultural and educational factors at the levels of the individual, their families and external environments, are expected to influence their behaviours and attitudes whilst driving.

Previous findings have reported that the early stages of licensure, particularly in the first year of obtaining a licence, can be the most dangerous periods

of driving with the highest crash rates reported in that period. This elevated crash rate is termed the novice young driver problem (Lam, 2003). Moreover, there have been other studies that reported that this elevated crash rate and risky driving behaviours in the novice period can vary according to different cultural ethnicity and backgrounds (Rasanathan et al., 2008). Hence, as this study is focused on Korean Australians, it is expected to show different driving behaviours and attitudes for young novices compared with the Australian novice drivers studied by Scott-Parker et al. (2012).

4.3 Methods

4.3.1 Participants

Young Korean Australian drivers aged between 16 to 25 years were recruited for the survey. The minimum requirement for participation was to hold at least a current Australian Learner's licence regardless of the issuing state or territory. The Korean Australian participants were identified through family, friends, peers and also through the Korean churches in Australia as churches have a significant role within the Korean community in Australia. The Korean students associations at University of Queensland, Queensland University of Technology, Griffith University, Monash University, Melbourne University, Royal Melbourne Institute of Technology, University of Sydney, University of New South Wales, and also Korean Society of Queensland and The Korean Society of Victoria Australia were sent fliers via email requesting them to forward the email or notify any potential participants who were willing to be involved. Other participants were approached in person and were asked whether they were willing to participate and were then provided with the recruitment flier and participant information sheet once they agreed to participate. The QUT Key Survey software was used to present the online version of the questionnaire.

The online questionnaire was accessed 191 times but some participants may have accessed the survey several times. Overall, 35 responses were recorded as submitted and 29 were recorded as pending. Many of these participants had completed the survey and submitted their details for the prize draw but left without pressing the button to submit the completed questionnaire. These participants were added to the final sample. An additional seven participants who had incomplete responses but had completed most items were also added to the total. Hence data from 78 participants were analysed for the study. With Korean Australians being a minority population in Australia, the total number of participants was small.

Of the 78 submitted questionnaires, 36 (46.2%) were submitted by males and 42 (53.8%) by females. The mean age of the participants was 21.5 years (*SD* = 2.33) and the average length of stay in Australia was 11.8 years (*SD* = 5.80), but eight participants did not respond to this item. Only two participants had resided less than two years in Australia, having arrived in Australia in 2013.

Among the sample, 23 participants were Learner drivers (29.5%), 12 were Provisional 1 (15.4%), 13 were Provisional 2 (16.7%) and 29 were Open licensed drivers (37.2%) with one missing response. The mean age of licensure for the Learner licence was 17.5 years (*SD* = 1.60) and of the remaining 54 who held a Provisional or Open licence, the mean age for obtaining their Provisional licence was 18.76 years (*SD* = 1.80) but five had missing values. Table 4.1 below summarises the basic demographic details of the participants.

Table 4.1. Demographics of participants

	No. of participants	% sample	Mean (years)	SD
Age	78	100	21.5	2.3
Length of stay	78	100	11.8	5.8
Male	36	46.2		
Female	42	53.8		
Learner	23	29.5		
Provisional 1	12	15.4		
Provisional 2	13	16.7		
Open	29	37.2		

NB. Percentages do not always add to 100% because of rounding error.

The participants were recruited Australia wide hence came from states with different GDL system including licensing age. In total, 54 participants were Queensland residents, 14 from New South Wales and four were from Victoria. From the total, 64 participants reported they were single, whereas 12 were in a girlfriend/boyfriend relationship, one de facto and one married. Furthermore, 69 participants were full-time studying students leaving only four who were part-time and five not studying at all. For employment status, five participants were in full-time employment, 14 working part-time, 27 casual and the majority (32 participants) were not working. High numbers of the participants reported they completed either senior secondary (Grade 12) or university, 38 and 31 participants respectively. Only five participants reported they completed Junior (Grade 10) and four reported they completed TAFE/traineeship/apprenticeship.

4.3.2 Study design

Study 2 was an anonymous cross-sectional questionnaire. The survey items were primarily based on the results of focus group sessions in Study 1 and some of the BYNDS items used by Scott-Parker et al. (2012). The following section describes the independent and dependent variables.

4.3.2.1 Independent variables

As discussed in the previous chapters, this research was based on Bronfenbrenner's ecological model. The independent variables were developed from the five categories of the ecological model. Firstly, the socio-demographic information about the participants such as their age, gender, spoken language at home and their families' English was operationalised as independent variables. In addition, the licensing history and also the current licensing status of the participants were incorporated as independent variables in analysing the responses of the participants.

4.3.2.2 Dependent variables

Items to test the theoretical constructs were developed from focus group sessions and also previous studies on young novice drivers using the BYNDS scale. Questions covered the participants' perception of the GDL system; their thoughts on the requirement of supervision hours and their accuracy; thoughts on the structure and effectiveness of the system, and whether they had experienced any difficulty during the process. Furthermore, their driving behaviours in the previous six months and their willingness to follow the road rules were examined in addition to their previous crash experience and any traffic violation offences.

4.3.3 Materials

The questionnaire was designed to collect four key sets of information:

1. Socio-demographical details including age, gender, marital status, education and employment details in addition to their residential location.
2. The spoken language at home in addition to the English fluency of the young drivers and also their parents. Furthermore, questions related to family backgrounds and residential status including whether they lived with family members or lived alone in Australia as an overseas student were included.
3. Questions relating to their experience of the Australian graduated driver licensing experience, including their accuracy of logbook entry, their perceptions of the current legislation and also their parents' view of the system.
4. Questions relating to their driving behaviour and perceptions of certain driving behaviours.

The questionnaire was prefaced by a page of general information about the research including contact details of the researchers and the University's ethics committee. A page at the end allowed participants to submit contact details and a first name for an opportunity to be entered in a prize draw. A copy of the questionnaire is provided as Appendix A.

4.3.3.1 Participants' personal information

Information regarding age, gender, marital status, studying or employment status, licence status, the amount of driving experience, education level, residential area and the level of English proficiency of the individual and the parents was collected. Furthermore, questions about the family backgrounds were asked in order to explore the environment of the family; whether they had similar environments like an Australian family or were more traditional in keeping with their Korean heritage.

4.3.3.2 GDL Experience

In depth questions regarding the participants' experience and perceptions of the Australian GDL system were developed and operationalised based on information from the focus group discussions of Study 1. The participant's age and the state of licensure including obtaining their Learner's permit and the period of obtaining their Provisional licences were collected if it was applicable. Participants were asked about their supervision experience, who was their primary supervisor and whether there were any difficulties in fulfilling the requirements of the Learner stage including the availability of their parents for supervision. Moreover, the accuracy of the logbook entries was examined. The participants' perceptions of the GDL system were also examined including their thoughts on the requirement of supervision during the Learner stage and the structure of the system. Finally, questions asking subjective opinions on the effectiveness of the system and whether there were any potential complications due to language barriers and problems from cost-related issues were included in the survey.

4.3.3.3 Driving behaviour

Questions in regards to driving behaviours and their perceptions were developed from previous research by Scott-Parker et al. (2012). These included 40 items from the BYNDS scale about their previous driving behaviour in the past six months with responses on a five-point Likert scale.

The BYNDS is made up of 44 items consisting of five subscales: transient violations, fixed violations, misjudgment, risky driving exposure, and driving in response to their mood. The transient violations scale measures the driving behaviours that can be performed numerous times throughout the journey; fixed violations are items which are more stable in nature through the drive; misjudgement

identifies the driver errors; risky exposure assesses the exposure to risky driving times for the young drivers; and the driver mood examines the influence of their mood on their driving behaviour.

The participants answered BYNDS items which asked their driving behaviours from six months prior. In addition to the BYNDS items, other items were asked to rate their level of agreement with the road rules and to complete self-report items about their driving characteristics and their perception of compliance to road rules for themselves and others (parents, Korean friends, Australian friends, general public). Any offences caught by the police and penalties they may have received were questioned along with the amount of pressure they received from their friends, parents, passengers, other road users and themselves to follow the road rules.

4.3.4 Procedures

The University Ethics Committee clearance was provided for data collection (QUT Ref No. 1300000583). The questionnaire was piloted with five young Korean Australian drivers and minor adjustment was made from the feedback provided. The revised final version of the survey was released online and was also available in a paper version. The potential participants were contacted either face to face or via email.

4.3.5 Statistical analyses

The completed questionnaires were downloaded from KeySurvey and exported to a SPSS dataset. General t-tests, cross-tabulations and frequencies were then conducted to gather and analyse general demographic information. To investigate whether there were any differences in the amount of driving that would have required P1, P2 and Open licence holders to be treated separately in the later analyses, Scheffe's post hoc analyses were conducted to examine whether the

number of hours driven per week and the distances driven per week differed according to licence status. From the results, Provisional 1, Provisional 2 and Open licence drivers were grouped as one category and Learner drivers as another.

After this recoding, a non-parametric Mann-Whitney U-Test was performed to test for the differences between Learner drivers and other drivers in their previous driving behaviours, agreement to road rules, perceived influences on bending road rules, attitudes to road rules, perceived benefits and costs of bending the rules, number of offences and also the amount of pressure they receive from others to follow or bend the rules.

4.4 Results

4.4.1 Family characteristics

Of the 78 participants, 69 responded Korean (88.4%) was their most commonly spoken language at home with only eight reporting speaking English (10.3%) and one reporting speaking both English and Korean (1.3%). They were then asked questions in regards to their own level of English fluency and that of their parents. Table 4.2 below summarises the reported English ability of participants and their parents.

Table 4.2. Family's ability in English (no. of participants)

	Excellent	Very good	Good	Fair	Poor	Mean	Median	SD
Self	37	31	8	2	0	1.68	2.0	0.76
Father	4	10	28	23	13	3.40	3.0	1.07
Mother	3	3	15	32	25	3.94	4.0	1.01

NB. Excellent is coded as excellent as 1, very good as 2, good as 3, fair as 4, poor as 5.

When looking at the median responses, the trend was that participants perceived that their competency in English was the highest followed by their fathers then mothers. Questions were asked about their living and current visa status as

indicators of the current socioeconomic and cultural backgrounds of the participants. The highest proportion of participants, 40, reported they were currently living with both parents (51.3%) followed by six reporting living with one parent (7.7%). The remainder reported living with others that were not parents with 14 reporting living with non-relatives (17.9%), another 13 living alone (16.7%) and five living with their siblings or relatives (6.4%). Hence, from the 78 participants, 59.0% reported living with at least one parent. In regards to their visa status, 39 reported as Australian citizens, 18 as permanent residents and 21 as overseas students thus conveying high proportions of participants (73.1%) having permanent residency status in Australia.

When asked to rate *"On a scale from very Korean to very Australian, how would you describe your family?"* the vast majority of participants reported their families were either very Korean (38.5%) or somewhat Korean (46.2%). Only 14.1% reported as neutral, 1.3% reported being somewhat Australian, and there were no responses of being very Australian. Thus, 84.7% of participants nominated their family as being very and somewhat Korean.

The number of cars at home ranged from zero to five vehicles with a mean of 1.69 (*SD = .85*) per household. In regards to the parents' ability to drive, 72 participants answered this item and among them 10 reported only their father was able to drive and the remainder reported both parents were able to drive. There were no responses for only the mother being a driver or neither parent being able to drive.

4.4.2 Learner stage experience

Participants were asked about their experiences during the Learner stage of their licence. More than half of the participants (52.1%) reported their mothers were their primary supervisors, with 25.4% having fathers and 21.1% having instructors as their primary supervisor. Only one participant (1.4%) reported having another

category and reported it was with their aunt. When asked about whether they had any difficulty in receiving supervision, only three reported as definitely yes (4.2%). The remaining 16 replied as somewhat yes (22.5%), 14 as neutral (19.7%), 20 somewhat no (28.2%) and 18 for definitely no (25.4%). Furthermore, in regards to their parents' availability for supervision, 87.3% replied their parents were available to supervise often (21.1%), somewhat often (35.2%), and average (31.0%), leaving 9.9% as somewhat rarely and 2.8% as rarely. Thus data suggested that parents were mostly available for the participants to receive supervision whenever they were required. (Refer to *Licensing Experience* section in Appendix B.)

Overall, the mean age of obtaining the Learner's licence among the participants was 17.49 years (n=*76, SD* = 1.60). The mean age of obtaining Learner's licence was 17.60 years *(SD* = 1.71) for the 10 who reported that only their father was able to drive. For the 62 participants who reported that both their parents were able to drive, the mean age of Learner licensure was 17.52 years (*SD* = 1.63). It appears that having only one parent able to drive did not delay Learner licensing.

Amongst the 77 participants who had provided their licensure information, 67 reported they had obtained their Learner's licence from Queensland and 10 from New South Wales. Although there were four Victorian residents, none of them had obtained their Learner's licence from Victoria. From the Queensland sample the mean age of obtaining Learner's was 17.54 years (*SD* = 1.67) and from New South Wales, it was 17.20 years (*SD* = 1.03).

4.4.3 Licensing history and perceptions of the GDL

Among the participants there were 23 Learner drivers, 12 Provisional 1 and 13 Provisional 2, and 29 Open drivers. A chi-square test of independence was performed to examine the relationship between gender and the licence category of

the participants. The relation between the variables was significant, χ^2 (3, N =77) =10.84, $p < .05$. Males were more likely to be an Open licensed driver whereas females were more likely to be Learner drivers. See Table 4.3.

Table 4.3. Cross-tabulation gender vs licence stage

Gender/licence	Learner	Provisional 1	Provisional 2	Open	Total
Male	7	3	5	20	35
Female	16	9	8	9	42
Total	23	12	13	29	77

Among the 50 participants who had a Provisional or Open licence, the mean age of licensure in Queensland was 18.93 years (n=41, *SD* = 1.68) and in New South Wales it was 18.50 years (n=8, *SD* = 1.20). For Victoria there was only one participant who obtained their licence at 18 years. Overall, the mean age of obtaining the Provisional licence was 18.84 years (n=1, *SD* = 1.60). For drivers who had only their father being able to drive, their mean age of obtaining Provisional licence 1 was 17.71 years (*SD* = 1.70) whereas those who had both parents available in contrast reported a higher mean age of licensure of 19.12 years (*SD* = 1.49). An independent samples t-test was conducted to compare the age of licensure and supervision conditions and the results showed there was a significant difference in age for father supervision only (M = 17.71, *SD*=1.70) and both parent supervision (M = 19.12, *SD* = 1.49); t(46) = -2.27, p = .028.

Participants licensed under 18 years were categorised as immediate licensure and those above 18 years were delayed in licensure. From the total, 24 participants (48%) had obtained their Provisional licence between 16.5 and 18 years and the rest, 26 (52%), had obtained it above 18 years. There were 24 males in total, and 50%

were immediate licensure and the other 50% were delayed in licensure whilst for females, from 26 participants, 12 were immediate licensure (46.2%) and the rest, 14, were delayed in licensure (53.8%). A chi-square test of independence was performed to examine the relationship between gender and the delay of licensure. The relationship between the variables was non-significant, χ^2 (2, N =49) =3.66, p = .82. There were no significant differences present between genders for delayed licensure. (Refer to *Gender vs Licensure* section in Appendix B.)

In regards to the age of licensure for the general Australian population, a previous study by Scott-Parker and colleagues (2013) reported that from the total, 158 respondents obtained their Provisional 1 licence between 19 and 20 years and 928 when they were 17 to 18 years of age. This means only 14.5% were categorised as delayed licensure. Between genders, the data showed that 11.5% for males, 50 from 438, and 16.7% for females, 108 from 648, were delayed. Hence when this is compared to the Korean Australian sample, a greater proportion of drivers from Korean Australians was delayed in comparison to the general Australian sample.

To examine the young drivers' perception of the GDL system, they were asked about their opinions of the supervision requirement hours during their Learner stage. Most of the participants, 26.0% and 33.8%, reported that the supervision requirement was definitely and somewhat necessary respectively, and 15.6% reporting as neutral to the requirement. Only 19.5% reported that it was somewhat too lengthy and 5.2% reported it to be definitely too lengthy. Moreover in regards to the perceived effectiveness of the system, 59.7% reported that it was either highly effective or effective followed by another 32.5% having neutral thoughts. Only 7.8% reported that it was ineffective and no participants reported the GDL was highly

ineffective. Furthermore, most reported that the system was straightforward to follow with 14.3% reporting it was definitely straightforward, followed by 32.5% of somewhat straightforward, and another 35.1% of neutral. Only the minority of 14.3% and 3.9% experienced the system was somewhat to definitely complicated respectively. (Refer to Appendix C).

In regards to difficulties experienced as they progressed through the system, questions were asked on their difficulty due to language barriers due to English being their second language, and secondly, problems related to costs of the system. Furthermore, the number of attempts on their practical driving test was also questioned. A high number of participants (67.5%) rated their level of difficulty due to language barriers as insignificant, while 10.4% rated it as somewhat insignificant. The remainder reported some form of difficulty or neutral response with 3.9% for significant amount, 5.2% of somewhat significant and 13.0% reporting as neutral. It can be seen that as young drivers, their English competency was not a major source of barrier to progress through the licensing system. However, numbers were slightly different with 7.8% of participants reporting significant amount of difficulty due to costs followed by 23.4% reporting somewhat difficulty and 23.4% as neutral. The remaining 45.5% constituted an insignificant amount with 13.0% reporting somewhat insignificant and 32.5% as insignificant. Therefore, unlike language barriers, there was an even spread with some regarding costs as a barrier to abiding by the GDL system whereas some did not experience any difficulty. Nevertheless, participants were able to pass the driving test without major issues. In regards to the number of attempts, from the 50 participants with their Provisional licence; 28 passed on their first attempt, 14 on their second, seven on their third and one on their

fourth attempt. The majority did not experience great difficulty and passed the test on their first or second attempt of the practical driving test. (Refer to Appendix C.)

Furthermore, following up the perceptions of the effectiveness and the necessity of the requirements in the GDL system, participants were questioned about the accuracy of their logbook entries. As the revised system is relatively recent, 16 participants from Queensland reported that they were not required to complete logbook entries (20.8%). Nevertheless, from the remaining 61 participants, 51.9% participants reported they had either high accuracy (29.9%) or somewhat high accuracy with their entry (22.1%) and 11.7% reporting average level of accuracy. On the other hand, the remaining 10.4% reported somewhat low accuracy and 5.2% for low accuracy in their logbook entries. (Refer to Appendix C.)

4.4.4 Influence from friends and parents

Participants were asked to indicate what proportion of their parents, Korean friends, Australian friends, Australian young drivers and all Australian drivers bend the rules on a scale from 1 “none at all” to 5 “all of them”. Overall, the mean score for parents was the lowest at 1.67 (*SD* = .80) followed by Korean friends (M = 2.37, *SD* = .91) then all Australian drivers (M = 2.72, *SD* = .66). Australian friends were next (M = 2.82, *SD* = .88) with the highest level perceived being for Australian young drivers (M = 3.45, *SD* = .87).

Participants were also asked about the amount of pressure (either positive or negative) they feel from people to either bend or follow the rules. The scale ranged from 1 “an extreme amount to follow the rules” to 5 “extreme amount to bend the rules”. The participants reported the highest level of pressure to follow the rules from police officers (M = 1.55, *SD* = 1.03) followed by their parents (M = 1.86, *SD* = .88), then from themselves (M = 2.03, *SD* = .97). This was then followed by their

passengers (M = 2.32, *SD* = .97) then other road users (M = 2.55, *SD* = .81) and lastly by their friends (M = 2.56, *SD* = .83).

4.4.5 Driving behaviour

The participants' driving behaviour was measured using selected items from the BYNDS scale. Scheffe's post hoc analysis was conducted between the two licence categories with two questions: '*Think about your driving lately, in a typical week, roughly how many kilometres did you drive?'* and '*In a typical week, roughly how many hours did you drive?'* The distances driven in the last week differed significantly (F (3, 69) = 4.193, p<.01) with the mean distance driven being lowest for Learners (39.12 km) and highest for P2 drivers (123.45 km). However, the post hoc tests were only statistically significant between Learners and P2 (Scheffe, p=.009). The differences between groups in the mean numbers of hours driven in the last week were statistically significant (F(3,70)=2.829, p<.05) with the mean number of hours driven being lowest for Learners (3.41 hours) and highest for P2 drivers (7.00 hours), but the post hoc test only approached statistical significance. No significant differences were detected between Provisional 1, Provisional 2 and Open licensed drivers. Therefore, Learner licensed drivers were treated as one category and Provisional 1, Provisional 2 and Open licensed drivers were combined as another category when examining the driving behaviours and attitudes.

As the questions regarding behaviours and attitudes related to the past six months, the data for Learner licence holders and Provisional 1 holders were inspected to see if there were any participants who had held that class of licence for less than three months. If the participant had just obtained their Learner's licence, their previous six months would include an unlicensed period and hence would not be applicable for the study. Similarly, if the participant had just recently obtained

their Provisional 1 licence, this would mean that their previous six months would be in the Learner period hence they would need to be shifted to the Learner category for the purpose of these analyses. Thus for this reason, length of three months were chosen over six months. From the 23 Learner drivers, only three participants had held their licence less than six months (two, three and four months) with the mean of 18.25 months (*SD* = 13.68) ranging from two to 53 months. There were 12 Provisional 1 holders and none had held a licence less than six months with the average of 24.08 months on Provisional 1 (*SD* = 18.78) ranging from 7 to 76 months. The length of licensure for Provisional 2 and Open licence holders was not able to be calculated as there were no questions asking their time of obtaining these stages. Nevertheless, participants had been licensed long enough to ask questions relating to the previous six months of driving thus no participants were reassigned to other categories.

The young drivers' behaviour was firstly examined using some questions from the revised version of the BYNDS scale (Scott-Parker et al., 2012). Table 4.4 on the next page summarises the responses.

Table 4.4. Responses to BYNDS items by young Korean Australian Learner licence holders and licensed drivers (reported in percentage)

BYNDS	Never %	Occasionally/Sometimes %	Usually/Always %
You drove when you thought you may have been over the legal alcohol limit			
Learner	100.0	0.0	0.0
Driver	87.0	13.0	0.0
You drove after taking an illicit drug such as marijuana or ecstasy			
Learner	91.3	8.7	0.0
Driver	94.4	5.6	0.0
You spoke on a mobile that you held in your hands			
Learner	95.7	4.3	0.0
Driver	63.0	37.0	0.0
You did an illegal U-turn			
Learner	87.0	8.6	4.3
Driver	61.1	38.9	0.0
You didn’t always indicate when you were changing lanes			
Learner	60.9	39.1	0.0
Driver	48.1	48.1	3.8
You drove over the speed limit in areas where it was unlikely there was a radar or a speed camera			
Learner	65.2	34.8	0.0
Driver	38.9	48.1	13
You went up to 10km/hr over the speed limit (e.g. 60 in a 50)			
Learner	47.8	52.1	0.0
Driver	22.2	70.4	7.5
You went 10-20km/hr over the speed limit (e.g. 72 in a 60)			
Learner	82.6	17.3	0.0
Driver	40.7	59.2	0.0

You went more than 20km/hr over the speed limit (e.g. 60 in a 40)			
Learner	95.7	4.3	0.0
Driver	57.4	40.8	1.9
You sped at night on roads that were not well lit			
Learner	91.3	8.7	0.0
Driver	70.4	29.7	0.0
You didn't always wear your seatbelt for a short trip			
Learner	82.6	17.3	0.0
Driver	83.3	14.8	1.9
You didn't always wear your seatbelt			
Learner	91.3	8.7	0.0
Driver	87.0	13.0	0.0
Your passengers didn't wear seatbelts			
Learner	95.7	4.3	0.0
Driver	74.1	26.0	0.0
Your carried more passengers than there were seatbelts in your car			
Learner	91.3	8.7	0.0
Driver	74.1	26.0	0.0
You carried more passengers than could legally fit in your car			
Learner	95.7	4.3	0.0
Driver	70.4	29.7	0.0

NB. The percentages do not always add to 100% due to rounding errors.

Mann-Whitney U-tests were conducted for each of the BYNDS items to test for differences in reported frequencies of the behaviours between Learners and licensed drivers. Among the 15 questions, statistically significant differences were found for eight items, as shown in Table 4.5. The tests showed that young licensed drivers significantly more often reported using a hand-held mobile phone (U = 415.0, p = .003), making illegal u-turns (U = 475.5, p = .047), driving over the speed limit

in areas where it was unlikely there was a radar or speed camera (U = 397.5, p <.05), speeding up to 10km/hr (U = 381.0, p = .005), between 10-20km/hr (U = 357.0, p = .001) and over 20km/hr (U = 391.5, p = .002), speeding at night on roads that were not lit (U = 486.0, p=.042), their passengers not wearing seatbelts (U =485.5, p = .029) and carrying more passengers than would legally fit in the car (U = 462.5, p = .015). (Also refer to Appendix D.)

Table 4.5. Mann-Whitney U-test comparisons of reported behaviour of young Korean Australian Learner licence holders and licensed drivers

Behaviour	Mann-Whitney U	Z	Assymp. Sig (2-tailed)
You drove when you thought you may have been over the legal alcohol limit	540.00	-1.80	.072
You drove after taking an illicit drug such as marijuana or ecstasy	603.50	.46	.648
You spoke on a mobile that you held in your hands	415.00	-2.94	.003*
You did an illegal U-turn	475.50	-1.99	.047*
You didn't always indicate when you were changing lanes	536.00	-1.04	.298
You drove over the speed limit in areas where it was unlikely there was a radar or a speed camera	397.50	-2.69	.007*
You went up to 10km/hr over the speed limit (e.g. 60 in a 50)	381.00	-2.81	.005*
You went 10-20km/hr over the speed limit (e.g. 72 in a 60)	357.00	-3.26	.001*
You went more than 20km/hr over the speed limit (e.g. 60 in a 40)	391.50	-3.14	.002*

You sped at night on roads that were not well lit	486.00	-2.04	.042*
You didn't always wear your seatbelt for a short trip	618.50	-.04	.966
You didn't always wear your seatbelt	592.50	-.57	.569
Your passengers didn't wear seatbelts	485.50	-2.19	.029*
Your carried more passengers than there were seatbelts in your car	513.00	-1.71	.088
You carried more passengers than could legally fit in your car	462.50	-2.44	.015*

N.B. Asterisks show items that were significantly different in the previous study with Australian samples (Scott-Parker et al. 2012).

Additional questions related to restrictions included in the GDL system. The four key questions were '*You drove a high-powered vehicle', 'You drove at night', 'You carried 2 or more passengers after 11:00pm'* and '*You carried your friends as passengers at night'*. The items *you drove at night* (U = 389.0, p = .008), *you carried 2 or more passengers after 11:00pm* (U = 345.5, p = .001) and *you carried your friends as passengers at night* reported statistically significant differences between licence stages (U = 300.0, p < .001).

Twelve items measured the participants' level of agreement with road regulations. Questions regarding the drivers' perspective such as 'it is alright to bend the road rules sometimes', 'you can't follow the rules all the time' and 'road rules are made to be bent' were asked. There were no significant differences in response between the licence categories.

Two of the six items measuring the influences participants perceived relating to bending rules showed statistically significant differences between Learners and others. Learners reported being more strongly influenced to bend the rules when they saw other novice drivers doing so compared to others, (Learners: M = 2.12, *SD* = 1.39; and other licensed drivers: M = 1.51, *SD* = 1.05, *U* = 390.0, p = .035) and more strongly influenced when they saw their parents doing so (Learners: M = 2.59, *SD* = 1.35; and other licensed drivers M = 1.49, *SD* = 1.16, *U* = 309.5, p = .001). However, there were no significant differences between the Learners and the other licensed drivers for the nine items about their agreement with the road rules.

In regards to individual perceptions of the benefits and costs that result from bending the rules, only one of the ten items reached statistical significance; *bending the rules like speeding saved me time* (*U* = 301.0, p = .003). The Learners (M = 1.90, *SD* = 1.14) reported greater disagreement to this statement than the licensed Provisional 1 or above (M = 3.39, *SD* = 1.89). (Refer to Appendix D.)

Participants were also asked whether they had been caught in the last six months for any driving offences. There were six missing responses and among the rest only four participants (5.6%) reported they had been caught committing driving offences; two caught for speeding, another for drink driving and the fourth for use of mobile phone whilst driving. Three participants (4.2%) reported they had crashed in the previous six months. However, they were not the same participants who had been caught for driving offences.

4.5 Discussion

This study examined the GDL experience of young Korean Australians through an online survey. It focused on the delays and difficulties they experienced

in progressing through the system and their driving-related attitudes and behaviours. Specific hypotheses were generated from past research and the findings of the focus groups with parents and young drivers (Study 1). The results are discussed in terms of these hypotheses in Section 4.5.1. Before discussing these findings, it is useful to examine the characteristics of the young drivers who participated in the survey in terms of the extent to which they and their families differ from native-born Australians in terms of language, family structure, and Korean identity. Each of these factors may underlie the specific findings in relation to the hypotheses and are relevant for assessing the generalisability of the results across different foreign-born cultures.

In order to analyse the influence of cultural and family factors, the item on the amount of Korean heritage in the family was used. The group was divided into those who rated their families 'very Korean' against those who responded that their families were 'somewhat Korean', 'neutral', 'somewhat Australian' or 'very Australian'. This was due to the small sample size and also because the sample was very homogenous with a majority of the participants reporting their families were either very or somewhat Korean. Initial analyses found very few significant differences between the 'very Korean' and 'other' groups and so this comparison was not reported in the results section. (Refer to Appendix E.)

Moreover, to address the influences of the driving legislation, participants were compared according to current licence status to investigate its effect on driver behaviour and attitudes. Overall there were mixed outcomes for the hypotheses. These findings are discussed below.

4.5.1 Support for study hypotheses

H_1: Korean-born novice drivers will be older when obtaining Learner and Provisional licences.

Participants were asked about their age of licensure to examine whether Korean-born drivers experienced delays in licensing. Overall, the mean age for Korean-born novice drivers to obtain their Learner licences was 17.5 years. Among the participants who had obtained Provisional 1 or other licence, the mean age of licensure was 18.7 years. Compared with the general Australian population from Scott-Parker and colleagues' (2013) study, a higher proportion of the Korean Australian drivers were over 18 years of age when obtaining their first licence. This provided support for H1.

H_2: Family factors such as not living with parents, parental licensing status and number and availability of vehicles in the household will contribute to difficulties in meeting supervised driving requirements.

Overall the participants responded that their parents were the most common supervisors during their Learner stage. Approximately 27.3% of the participants reported experiencing difficulty in regards to receiving supervision to comply with the GDL regulation. In response to another question, 88.3% of the participants responded that their parents were available often to average to assist in supervision.

In the case of Learner licensure, parental licensing status did not have any influence on the age of licensure, and whether both parents were able to supervise or not did not have any effect on the age of licensure. However, in regards to Provisional 1 licence, when only fathers were able to drive, the mean age of licensure was 17.7 years whereas participants with both parents being able to drive reported their mean age of obtaining their licence was 19 years. Hence if both parents were

able to drive and supervise, the age of obtaining the Provisional licence was higher. A possible explanation might be that if only one of the parents were able to drive, the young drivers may need to learn to drive for their own transport, but if both parents were available, transportation may not be a problem for them and hence was not necessary for them to be licensed as soon as possible.

H_3: Language difficulties and financial barriers will affect the attitudes to, or success in, the practical driving test.

Most participants (78%) rated the level of difficulty due to language barriers during the practical test as 'insignificant'. However, in regards to financial costs, the responses ranged from significant amount of difficulty to those who had experienced it as non-significant. Nevertheless, a majority of the participants (84%) had passed their practical driving test on either their first or second attempt; hence participants did not experience significant difficulties in obtaining their Provisional licence. A reason for this may be that most participants of this study have been in Australia for a substantial amount of time averaging over 10 years, with the majority being a permanent resident living with parents. For this reason, Korean Australian novice drivers in this study experienced less difficulty than predicted.

H_4: Novice drivers born in a country with a simple licensing system might believe the GDL system in Australia is unnecessarily complex.

The licensing system is much more complicated in Australia than in Korea. The Korean system does not include a graduated procedure and a driving licence can be obtained in a short period of time. Hence, Korean-born drivers were asked about their perceptions of the system in Australia.

In regards to the effectiveness of the GDL system, more than half (57.7%) of the participants answered that the supervision hours were somewhat necessary and a

further 16.9% reporting average to the requirement, hence a majority had understood the necessity of the supervision requirement. Furthermore, in regards to the perceived effectiveness of the system, more than half of the respondents perceived the system was effective in increasing road safety with a further third having neutral thoughts. Hence, although most respondents were from a country with a simple licensing system, they did not perceive the Australian system to be unnecessarily complex.

H_5: Korean-born novice drivers will report that the supervised driving requirements are too onerous.

In focus group discussion sessions in Study 1, participants responded that the GDL requirements in Australia were too onerous. Hence, this was investigated with the participants in the second study through the questionnaire. In contrast to the first study, 80% of the participants responded having a high to average level of accuracy in the logbook entries. Furthermore, in regards to the necessity of the supervision hours, more than 50% of the participants, perceived that it was definitely to somewhat necessary. More than 90% of the participants reported the GDL system to be highly effective to neutral. Less than 20% of participants experienced the system as too complicated.

H_6: Korean-born novice drivers will report low levels of risky driving behaviours because of their greater respect for authority.

When investigated about others bending road rules, parents were rated the lowest followed by their Korean friends then all other Australian drivers. Australian friends came next with other young Australian drivers being perceived as the highest group bending road rules. Therefore, it can be seen that the participants perceived that their parents were safer and have lower risk-taking driving behaviours than their peers. Although this would hold across numerous cultures, it is particularly

significant for the authoritarian and collectivist Korean culture (Cho, Mallinckrodt, & Yune, 2010) which is structured to follow and comply with the higher figurative authority, and this is why they would be more compelled to follow their parents and comply with the road rules.

Nevertheless, when looking at driving behaviour, high numbers of participants reported speeding. Whilst 52% of Learners reported speeding over 10km/hr, Provisional or Open licensed drivers were much more likely to report speeding by 10km/h (78%) than to never speed (22%). The patterns of results were similar but lower for responses to speeding beyond 10km/h. These patterns of behaviours were reported from the previous study conducted with young Australian drivers. Whilst the majority of young drivers reported compliance to GDL, 70% of Learners reported speeding and greater non-compliant behaviours once the drivers reached the Provisional stage (Scott-Parker et al., 2012). It is also consistent with the US findings that GDL was not effective in reducing fatal crashes involving speeding (Romano et al., 2011).

H_7: Korean-born novice drivers will be influenced more strongly by parents than peers.

Korean-born novice drivers reported that police officers provided the greatest pressure to follow the rules followed by parents, themselves, passengers, other road users and the least from their friends. Therefore, the interdependence culture within Koreans was evident in the greater levels of compliance to figures with greater authority and status.

H_8: The levels of risky driving behaviour will increase as novices move from the Learner to the Provisional stage.

The participants' licensing status influenced the behaviours of the young drivers. When examining the responses to the revised BYNDS items, it can be seen that overall Learner drivers were less likely to report engaging in dangerous or illegal driving behaviours than licensed drivers. The percentage of responses as 'never' was higher for Learner drivers than other licensed drivers and responses of 'occasionally/sometimes' were higher for other licensed drivers than Learners. For eight of the 15 items, driving behaviours for Learner drivers were significantly safer and less risk taking than other drivers. When compared with the study conducted by Scott-Parker et al. (2012), the general patterns were similar with higher responses for illegal or dangerous behaviours after obtaining their licences in comparison to the Learner's stage. In both studies there was no reported increase for illicit drug usage between licences.

The most outstanding difference between the two studies was in the questions related to seatbelt usage as this current study reported much higher levels of not wearing seatbelts for both Learners and the rest of the drivers. Furthermore, illicit drug usage, illegal U-turns and not indicating when changing lanes had higher response rates than in the previous study. These outcomes were consistent with key questions relating to restrictions for drivers through the Learner and Provisional stages. Driving high powered vehicles, driving at night, carrying two or more passengers after 11:00pm all had higher responses from Provisional 1 or higher drivers than Learner drivers.

When the participants were asked about their level of agreement with road regulations, no items reached a statistically significant difference between licence statuses. However, when asked about the influence of others in bending road rules,

two items showed statistical significance: remembering when their parents bent the road rules; and the influence of other novice road users. The Learners reported significantly higher levels of agreement to influence from these external influences whereas other licensed drivers reported lower influence. The nine items on attitudes to road rules displayed no significant difference in licence status.

In regards to level of agreement to benefits and costs of bending the road rules, one item showed statistical significance over the remaining nine. Drivers with Provisional 1 or higher stage licence reported greater agreement than Learner drivers that they would save time when they bent the road rules such as by speeding. Further questions on attitudes to bending road rules showed no statistical difference between licence categories.

4.5.2 Applying the theoretical model

The framework of Bronfenbrenner's ecological model (Bronfenbrenner, 1994) has been applied to the current research to interpret its outcomes. Bronfenbrenner's ecological model is constructed with five levels of systems: micro, meso, exo, macro and chronosystem. Microsystems are settings where the individual plays a direct role and experiences direct social interaction with others. Mesosystem defines multiples of microsystem interactions and exosystems explain the broader interaction of two or more settings but do not direct influence over the individual. Macrosystems explain the cultural influence or the ideologies that result in long-ranging consequences and finally the chronosystem defines change or consistency over time in the person and their environment. Hence the study was based on these five levels of the model.

The first three hypotheses sought to explain the participants' experience of the Learner period and the overall GDL system including any difficulties they

experienced in terms of the micro, meso and macrosystems. In regards to the supervision experience during the Learner stage, participants reported they did not experience a significant amount of difficulty due to language barriers even though they were foreign-born drivers. The reasons may be due to the average length of stay for participants being about 10 years; hence participants reported their English ability as fluent. However, there was an even spread of perceived difficulty due to cost related issues. Whilst some did experience difficulty financially, others did not and these outcomes were not related to the cultural background of the family. Furthermore, questions regarding difficulties receiving supervision and the availability of the parents, revealed no significant differences between 'very Korean' families and those families with a weaker Korean identity and family backgrounds did not affect the primary supervisor of the participants. Therefore micro, meso and macrosystems did not appear to strongly influence the experience of the Learner period and overall GDL system.

Hypotheses 4 and 5 examined the influence of personal background factors such as the family structure and ethnic backgrounds on experiences and perceptions of the GDL system. Despite the participants coming from a nation without a GDL system, they still accepted the necessity of such a system and displayed high compliance with the requirements of the system. Therefore unlike in Study 1, the outer levels of the exo and macrosystems, the factors explaining of the community and the attitudes and culture, may not have had a negative influence towards the GDL system but rather displayed a constructive view which led to compliance by the participants.

Hypotheses 6 and 7 examined the influence of peers, family and others around the participant that were likely to affect actual driving behaviours and attitudes. Participants perceived that their parents would bend road rules the least followed by their Korean friends, then Australian friends, overall Australian drivers and lastly the most with young Australian drivers. This outcome was similar to Study 1 and it may be due to in-group bias where the participants for the research were a Korean Australian sample, so they may have perceived that Korean-born drivers would be safer and have greater compliance with the road regulations. In addition, the general stereotype of young Australian drivers being dangerous may have also played an influence in this outcome. Moreover, when asked about their perception of expectations to follow the rules, the greatest amount of pressure was perceived to come from police officers who are the authority figures in the higher exosystem category. It was then followed by parents, themselves, passengers, other road users and their peers. It can be seen that peers were the least influential on participants to follow the road rules.

Hypothesis 8 focused on the exosystems to see whether the licensing structure influenced the driving behaviour and attitudes to road safety of the participants. Particularly with the revised BYNDS scale, the results supported the hypothesis. In general the Learner drivers were more likely to comply with the road rules than other drivers with Provisional 1 or higher licences that were able to drive unsupervised. Learners were more likely to abide by the GDL regulations than other drivers.

The lower seatbelt wearing rates by both Learners and other drivers in comparison to the Australian young drivers is likely to reflect current legislation in

Korea which requires all passengers to wear seatbelts on motorways but not on national roads, rural and countryside roads (Korea Ministry of Government Legislation 2014). While the Korean government is pushing towards having seatbelt requirements for all national roads by 2015, a nationwide survey in 2011 showed that while 84% of drivers and 72% of passengers wore seatbelts, only 4.5% of rear seat passengers wore seatbelts (IRTAD, 2012). Having such low usage, particularly for rear passengers, may be due to the law enforcement in the exosystem, thus creating the tendency in the overarching macrosystems in Korea for drivers to assume it is not necessary to wear seatbelts. Although the participants' knowledge of the Korean seatbelt laws was not assessed in the current research, these values may have carried over in time even to young Korean Australian drivers thus influencing the outcome from this study. Chronosystems explain change of conditions or situations over time, and therefore it can be applied to explain this behaviour.

Furthermore, the amount of influence from others to participants on bending the road rules differed depending on the type of licence of the participants. This meant that the level of influence that came from the microsystems differed due to the circumstances of the exosystem. Although in general Learner drivers were less likely to bend rules, the results showed that they were more likely to be influenced by others to bend the rules in comparison to higher levels of licensed drivers. Lacking experience in driving may have influenced this behaviour.

4.5.3 Strengths and limitations of the study

A major strength of this study was that it investigated a new area of research where there is little literature in examining the effectiveness of the GDL system for drivers born overseas or with different ethnicity. The study was based on the Bronfenbrenner's ecological model as the model identifies five environmental

systems that interact together for human development, thus resulting into their behaviour (Bronfenbrenner, 1994). In addition, the BYNDS scale was used to evaluate driving behaviour and attitudes for the participants as it has been successful in evaluating the driving behaviour issues of young novice drivers (Scott-Parker et al., 2012). Finally, general socio-demographic information was added to examine if these variables explained any additional variance when the theoretical constructs have been considered.

Study 2 provided a distinctive examination of evaluating the driving behaviours and the perceptions and experiences of the GDL system in association to cultural and socioeconomic factors. Previous studies have focused on the driving behaviours with cultural and socioeconomic factors. There is minimal, if any, literature which analysed the factors of experience and perceptions of the GDL with cultural and socioeconomic factors.

The questionnaire was developed based on the information collected by Korean Australian drivers in Study 1. Furthermore, relevant literature was used to further revise the questionnaire and contributed to the scale utilised. Another strength of the study is that it identified drivers' behaviour and their attitudes with different background of participants in comparison to previous literature. Whilst previous studies were based on the overall Australian population, this study was able to target the driving behaviours of a specific minority group born overseas and was relevant to the Australian driver licensing system and motorists.

This study mainly attracted participants from the South East Queensland region and due to the age restriction the majority of the participants were students. However, due to the conditions of the study being focused on a minority population,

the sample size did not reach the expected size and thus may lack power. Most of the participants categorised themselves as having a strongly Korean identity, which prevented comparisons according to their level of Korean identity. Hence this cultural comparison could not be conducted. If the factors for family environments were more diverse, this may have produced a result with greater understanding in the differences between family and cultural factors. Furthermore, as it was focused on Korean Australians, caution needs to be exercised when generalising the results of this current study to other overseas-born drivers in Australia. While the snowballing recruitment method precluded a calculation of response rate, the length of the survey may have resulted in some respondents beginning but not completing or submitting the survey.

4.6 Conclusion

Through testing the eight hypotheses, this study has identified the difficulties and experiences of young drivers as they progress through the GDL in addition to their and their parents' attitudes to the GDL system. Furthermore, the study was able to observe the driving behaviours of young Korean Australian drivers and thus has displayed the socioeconomic, cultural and family factors that contributed to these drivers' behaviour and attitudes. In general the data showed family factors and cultures did not significantly influence the experience and perceptions of the GDL system. However, as mentioned before this may be due to the sample being relatively homogeneous. Nevertheless, the findings regarding the influence of licence status on driver behaviour and attitudes were consistent with previous studies of Australian drivers, showing that this phenomenon occurs even for drivers born overseas. The results of this study have been presented in both the terms of the four hypotheses and also the stages of Bronfenbrenner's ecological model. A more comprehensive

integration of results from both Study 1 and Study 2 will be presented in the next chapter.

Chapter 5 – Discussion

5.1 Introductory Comments

The research presented in this thesis investigated the socioeconomic and cultural factors influencing foreign-born novice drivers' experience as they progress through the Graduated Driver Licensing system using the Bronfenbrenner's Ecological Model as a theoretical framework. The aims of this study were to develop a greater understanding of the experience of foreign-born novice drivers as they progress through the GDL system and to explore the socioeconomic and cultural factors that are influencing their driving behaviour and attitudes on Australian roads. Korean-born Australians were the particular case study examined in this research.

The qualitative study (Study 1) presented in Chapter 3 explored the attitudes, experiences and perceptions of the GDL system of Korean-Australian novice drivers and their parents. The quantitative study (Study 2) in Chapter 4 built on these findings to further quantify the influences of societal factors on driving behaviour and attitudes in addition to family and cultural influences.

The current chapter will integrate the information gathered throughout the research and discuss the findings in terms of answering the research questions listed in Chapter 2. The theoretical and practical implications for road safety will also be examined and suggestions for improving driver licensing will be discussed.

5.2 Review of Findings

5.2.1 Research question 1: What delays or difficulties do foreign-born novice drivers experience in entry and progression through the GDL system?

In the Study 1 focus group discussion sessions, novice driver participants reported that there was a delay in licensure compared to other Australian-born drivers. The main reasons were due to the cultural factor that their parents wanted them to focus on their academic studies and delay obtaining their Learner's licence until after graduating from high school. Nevertheless, the participants felt that it was necessary to be licensed as soon as possible to overcome the restrictions in mobility caused by relying on public transport. Differences between Korean Australians and other novice drivers could not be directly assessed as Australian samples were not recruited for the study. Nevertheless, from the second study, a greater proportion of Korean Australian drivers reported delayed licensure by obtaining it after the age of 17 in comparison to general Australian drivers from other studies (Scott-Parker et al., 2013). The mean age of obtaining a Learner's licence was 17.6 years which is older than the actual requirement of 16 years in Queensland, New South Wales and Victoria. There was a delay in obtaining their Provisional 1 licence as well, with the mean age being 18.8 years. The general percentage of delayed licensure in obtaining a Provisional licence was 50% for Korean Australians, without significant differences for both genders whereas it was 14.5% for young Australian drivers (Scott-Parker et al., 2013). Hence, Korean Australians were more likely to be delayed in licensure in comparison to general Australian drivers. Therefore it can be seen that the effects of microsystems, mesosystems and the exosystems within the family and culture had influenced the perceptions of licensure and thus brought delays to entering and progressing through the system.

Participants from Study 1 mentioned difficulties in receiving enough supervision due to costs and the availability of a supervisor. This was mainly due to the participants being overseas students living away from home. Nevertheless, receiving supervision was not identified as a problem for the participants in Study 2 where only 4.2% of participants responded with 'definitely yes' for difficulty in receiving supervision and only 2.8% reported that their parents were rarely available for supervision. Furthermore, only 3.9% of Study 2 participants noted significant difficulty due to language barriers and only 7.8% had significant difficulty due to costs. Therefore, unlike in Study 1, the majority of the participants in Study 2 did not experience problems throughout their experience of the GDL system.

5.2.2 Research question 2: What are the attitudes of foreign-born novice drivers and their parents towards GDL?

As mentioned above, in the focus group discussions Korean Australian novice drivers reported that they experienced difficulties in reaching 100 hours of supervision. This resulted in many reporting that the licensing procedure was too lengthy and strenuous and responses that displayed a lack of belief in the effectiveness of the system. This appeared to stimulate lack of understanding of the system and thus low compliance to the GDL regulations, where participants reported manipulating their logbook entries and not fulfilling the 100 hours supervised driving requirement. However, these issues were mainly a result of the participants not living with their family, rather than specifically due to being foreign-born drivers. When the same items were asked in Study 2, these effects were not observed. Rather, three quarters of the participants reported that they agreed with the necessity of the supervision requirements and most of the participants reported passing their practical

driving examination on either their first or second attempt. Only 5.2% of participants in Study 2 reported low levels of accuracy.

Hence the outcome from the questionnaires conflicted with the results of the focus groups. A possible reason for this may be that focus group participants were more likely to be overseas students living without their families. However, the participants for the questionnaire had higher proportions of permanent residents residing with their parents. Therefore it seems that differences in attitudes and difficulties with GDL may relate more to living with family or not, rather than being born overseas.

The Australian GDL system is much more comprehensive than the licensing system in Korea. The parents in the focus groups appreciated the structure of the GDL system and that it was necessary for educating and developing the ability for their children to drive safely. They perceived that the requirement of 100 hours of supervised driving hours was necessary and felt it supported novice drivers to gain confidence and skills to be more competent to later drive unsupervised. Some parents even suggested that the minimum age for beginning to drive should be increased to improve safety.

However, the attitudes of novice drivers in the focus group session differed from parents, with some young drivers perceiving that the system was overly extensive and long. Nevertheless, when examining the same perceptions during Study 2, more than 90% of young drivers reported positive perception of the effectiveness of the GDL system. Therefore, there were conflicting results between parents and novice drivers in Study 1 and between novice drivers in Study 1 and 2.

5.2.3 Research question 3: What are the driving behaviours of foreign-born novice drivers?

During the focus groups, participants compared the driving behaviours of Korean Australian novice drivers with the driving behaviours of other Australian novice drivers. The broad perception was that Australian-born novice drivers, particularly provisional drivers, were much more dangerous than Korean novice drivers. These perceptions were also present in the questionnaire as Australian novice drivers were reported as most likely to bend the road rules. As mentioned in Chapter 3, in-group bias may have influenced these perceptions. Participants are likely to have seen many more examples of Australian novice drivers not complying with the road rules in comparison to the Korean Australian drivers for the same behaviour. Hence, this may have resulted in the participants perceiving Australian novice drivers as a greater threat to road safety.

Through the second study, the revised BYNDS scales (Scott-Parker et al., 2010) were used to investigate the driving behaviours of Korean Australian novice drivers, allowing the outcomes from Study 2 to be compared with the results from previous studies investigating the driving behaviour of Australian novice drivers (Scott-Parker et al., 2012). Generally, for both Korean Australian and Australian-born drivers, illegal or dangerous behaviours were reported as more prevalent after obtaining their Provisional 1 licence than for Learner licence holders. However, as noted in Chapter 4, there were differences between the results for Korean Australian drivers and Australian drivers reported in earlier studies. Korean Australians reported not wearing seatbelts more often and more frequent illicit drug use, illegal U-turns and not indicating when changing lanes for both Learner and Provisional licence holders in comparison to the Australian novice drivers. Cultural and societal factors

may have contributed as driving patterns and behaviours in Korea are different from Australia, and such patterns may have influenced the Korean-born drivers in Australia. It is a legal requirement in Australia that all passengers in the vehicle wear seatbelts (Transport Operations Road Use Management Regulation, 2009, s264, s265, s266) whereas this is not a full requirement on roads other than highways and motor vehicle-only roads for passengers in Korea. Hence, Australian drivers may have developed seatbelt usage as a basic habit whilst for Koreans it is an active behaviour that needs to be performed to meet the requirement. This interpretation is supported by the findings that these outcomes were similar regardless of the licence level of respondents. To explain seatbelt usage becoming a habit for drivers, the outer levels of the macrosystem and exosystem explain the influence of culture and surrounding environments on the individual in producing the behaviour. Furthermore, this habit would have been produced over time, thus chronosystem can be applied to describe this eventual change in behaviour.

Previous studies by Tosh and Simmons (2007) in the United States reported Asian drivers having the lowest prevalence levels in risk-taking behaviours which also correlates with studies conducted in Australia and New Zealand where foreign-born drivers with an Asian background were less likely to engage in risky driving behaviours (Boufous et al., 2010; Rasanathan et al., 2008). Therefore, when relating the current study back to the literature, regardless of other studies reporting foreign drivers to be at greater risk than native drivers (Petridou et al., 1999; Wilks et al., 2000; Yannis et al., 2007), self-reported measures from participants responding that they are safer drivers than general Australian drivers may be a reasonable outcome.

5.3 Contribution to Theory

The results of this research show that Bronfenbrenner's ecological model was able to explain some aspects of driving behaviours and experiences of the graduated driver licensing system for Korean- -born novice drivers. Previous studies have not applied this model into this area of research hence it was a novel approach to the area of driver licensing.

The five categories of the model were invoked to explain the behaviours and attitudes of Korean Australian novice drivers to road rules and also the GDL system. By investigating the multiple effects of influence from family and peers in the experience of the GDL system and attitudes to the road rules, microsystems and mesosystems can be applied to explain the outcome. In addition, the cultural heritage and the background of the families were significant factors in explaining the novice drivers' behaviour to which the exosystem and the macrosystems can be applied to justify for the behaviours. These aspects were well distinguished through focus group discussions as participants had responded that their cultural aspects of the family and Korean society had played a role in shaping their attitudes towards the compliance to rules and regulations of GDL. In particular, the questionnaire from Study 2 was able to show the robust effects of exosystem and macrosystem in attitudes and ideologies of culture and the legislations of the driving system to influence drivers' behaviour and their attitudes as to whether or not to comply with the regulations. Having traditions and customs carried between generations and also time influencing a change to driving behaviours and attitudes, chronosystem was able to be provide a framework to explain these influences to the driving behaviours of Korean Australian novice drivers.

5.4 Strengths and Limitations to the Research

The research was focused on a novel area investigating the driving behaviours and also the experience of the driver licence system on a foreign-born population. Furthermore, the study utilised Bronfenbrenner's ecological model to explain the behaviours of the drivers which was a different approach to previous literature. Hence, this study has made a new contribution to the literature on road safety.

The focus group discussions were able to concentrate on the model and explain the behaviours highlighting the differences and difficulties experienced by overseas-born drivers. Previous studies by Scott-Parker and colleagues (2012) showed drivers from a non-English speaking background reported lower compliance levels to GDL including greater falsification of logbook entries. This was supported by similar responses from the focus groups. Also, further information on driving behaviours specific to Korean Australians was given and this was a strength of the study. However, focus groups were conducted on the Gold Coast and these results may differ if the sessions were conducted in larger cities where there is a better public transport system.

The quantitative analyses conducted in Study 2 displayed results that were sometimes in conflicting directions and had results with lower levels of significance due to the characteristics of the sample. Having this outcome can be viewed as both a strength and a limitation to the study. The reason for conflicting directions of results could be due to the different living circumstances of the two participant samples. Many of the focus group participants were living away from home and thus experienced difficulties in complying with the graduated licensing system whereas the questionnaire participants from the were mostly living with their families and

experienced fewer difficulties. The methodologies also differed with open-ended responses in the focus group versus closed responses in the questionnaire. Given that the closed responses were developed from the range of open-ended responses in the first study, this is unlikely to have been underpinned the differences in results between the two studies. Thus the current research examined two types of Korean Australian drivers, Koreans that live as overseas students and Koreans who are permanent residents in Australia, for whom the driver licensing experience appears to differ.

Furthermore, studies have displayed different driving behaviours according to the drivers' different lengths of residency in a foreign nation, thus including participants from Australians of Korean descent and first generation Korean Australians would have provided detailed specifics of driving behaviour rather than limiting to Korean-born novice drivers. In addition the small sample size for Study 2 restricted the types of statistical analyses that were possible, and hence was another limitation to the study. This made it difficult to define specific implications the research has brought to the area of road safety.

5.5 Implications for Road Safety and Suggestions for Further Research

As mentioned in the section above, due to the limited sample size it was difficult to draw strong implications from this research for road safety. Nevertheless, there were aspects where Korean Australian participants reported difficulties that are present when progressing through the GDL system due to being born overseas and also the differences in driving behaviour between different cultures. Certain aspects can also likewise affect the driving behaviour for Australian-born drivers of Korean descent who shares similar family, cultural and social environments of Korean Australian drivers born overseas. From the research, the characteristics of being

Korean have been explored. Families structured interdependently and being family oriented with an emphasis on compliance to family elders and the authority figures in society, prioritising academic achievements and following the behavioural values set by their parents were all Korean values. The research suggests that novice drivers who have been born overseas and those whose parents were licensed overseas may be slower to progress through graduated licensing if competing priorities are considered more important in their culture and that behaviours which are illegal in Australia but permitted in the home country may continue to be practised and thus hinder the safety of this group.

Furthermore, difficulties in fulfilling the GDL requirement apply not only to Korean Australians but also to many of the Australian population who are born overseas and residing without family members. New strategic methods need to be developed to address these measures in order to facilitate beginner drivers who experience difficulties in following the GDL regulation due to their circumstances.

Vast amounts of literature displayed the effectiveness of GDL with a reduction in crashes worldwide (Begg & Stephenson, 2003; Department of Transport and Main Roads, 2012; Nissley, 2001; Shope & Molnar, 2003). However, specific driving behaviours resulting from cultural and ethnic factors, such as low usage of seatbelts and indicating before changing lanes, need to be targeted to modify these behaviours.

Moreover, besides the factors involving overseas-born residents, the matter of different driving behaviours between Learner drivers and newly licensed drivers needs to be evaluated so that the level of compliance with road rules does not reduce once the drivers are licensed to drive unsupervised. Until now, regardless of culture

or ethnicity, it can be seen that once the drivers are licensed after their Learner's stage, they are less likely to follow the road rules and more likely to engage in risky driving behaviours. In addition, the discrepancies between the results of the two studies suggest that immediate factors, such as whether young people are living with their parents or not, may be equally as important as underlying cultural differences in their effect on progression through GDL. The second study confirmed that many of the increases in risky driving practices from the Learner to the provisional phase observed among Australian novice drivers also occur among foreign-born drivers, although the influence of peers may be less and that of parents, greater.

Therefore follow up measures after licensure need to be put into place in order to target these risky behaviours until the drivers reach a point in time or age where they increase compliance to the road rules and disengage from risky driving behaviours. Although the GDL's primary objective is to reduce exposure to high-risk driving situations while gaining experience, future studies need to explore the possible methods for the GDL system to actually promote safe driving behaviour amongst the young people rather than just a reduction in crash figures.

Specific differences between road rules between the country of birth and Australia can also exert an important influence on behaviour. In this case, the less rigorous seatbelt legislation in Korea may have contributed to the reports of poorer seatbelt use by passengers of the young drivers. This finding warrants further investigation of the seatbelt wearing rates by both young drivers and passengers and other Koreans living in Australia to determine the extent of this problem and, if required, to develop targeted approaches to increasing compliance.

5.6 Concluding Remarks

This research aimed to develop a better understanding of the driver licensing experience of foreign-born novice drivers, using Korean Australians as a case study. Bronfenbrenner's ecological model was used as a theoretical framework to structure the exploration of the perceptions, behaviours and attitudes of foreign-born novice drivers.

The research identified that Korean Australian novice drivers generally entered the GDL later and progressed more slowly than general Australian-born drivers. There were no significant difficulties related to language reported by the novice drivers, who generally had good levels of English. The results of the two studies suggest that immediate factors, such as whether young people are living with their parents or not, may be equally important as underlying cultural differences in their effect on progression through GDL.

Novice drivers perceived the GDL system as lengthy and complicated but their parents believed the system was well structured and provided comprehensive training that was necessary for young drivers to develop their skills before becoming fully licensed.

The second study confirmed that many of the increases in risky driving practices from the Learner to the provisional phase observed among Australian novice drivers also occur among foreign-born drivers, although the influence of peers may be less and that of parents, greater. Specific differences between road rules between the country of birth and Australia can also exert an important influence on behaviour. In this case, although the knowledge of the legislation amongst the participants were not assessed, the less rigorous seatbelt legislation in Korea appeared to result in poorer seatbelt use by passengers of the young drivers, as until

recently it was not a requirement for rear passengers to wear seatbelts. The young Korean Australian drivers may have been influenced by the non-use of seatbelts by parents or peers with this habit who have recently arrived in Australia to conform to lower seatbelt usage. This research has contributed to our understanding of driver licensing and driving behaviour for overseas-born drivers as they progress through the Graduated Driver Licensing system. There still remains the need to investigate the differences from cultural and socioeconomic factors with participant samples that are more diverse to gather significant supporting evidence. Furthermore, there is a need to develop methods to educate novice drivers (and their parents) in the importance of the GDL system with regards to their previous experience, socioeconomic status and cultural heritage in order to improve safety on Australian roads.

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Appendix A

Questionnaire for Study 2

The questionnaire that was used for quantitative analysis in Study 2 has been attached to this section.

Graduated Driver Licensing Experience of Young Korean Australians

The purpose of the proposed research is to gain a better understanding of the experiences of young Korean-born novice drivers as they progress through the graduated licensing system, in order to achieve improved road safety outcomes. The research will be based on the cultural, personal, socio-economical factors of the Korean-Australian drivers and their experience as they progress through the Australian driver licensing system.

PARTICIPANT INFORMATION FOR QUT RESEARCH PROJECT
Graduated Driver Licensing Experience of Young Korean Australians
QUT Ethics Approval Number 1300000583
RESEARCH TEAM
Principal Researcher: Jae Won Oh (Masters student)

Associate Researcher: Professor Narelle Haworth, QUT & Dr Mark King, QUT
Centre for Accident Research and Road Safety - Queensland (CARRS-Q), QUT
DESCRIPTIONThis project is being undertaken as part of Masters study for Jae Won Oh.
The purpose of this project is to understand the experiences of young overseas-born novice drivers as they progress through the Australian graduated driver licensing system. The research will focus on young Korean Australians but many of the factors may be applicable to other foreign born drivers.
For this research young Korean Australian drivers aged between 16 to 25 years who have a current Learner's or Provisional or Open car licence from any Australian state or territory will be invited to participate.
You are invited to participate in this project because you are a Korean Australian and your experience will be a valuable resource to the research.

PARTICIPATION
The research is looking for young novice Korean-Australian drivers aged between 16 to 25 years. The minimum requirement to participate is a valid Learner's licence that has been issued within any Australian state and there is no restriction on how long you have lived in Australia.
Participation will involve completing an anonymous survey (either online or on paper) that will take approximately 15 minutes of your time. Questions will include:
Example question 1: How often have you done the following behaviours? (1=never, 5=nearly all the time)
You misjudged the speed when exiting a main road
You drove at night
Example question 2: What language do you most commonly speak at home?

Included in the survey are some questions relating to potential participation in illegal behaviours, e.g. failing to give way, or not wearing a seatbelt. We wish to inform you that all answers of the survey are anonymous. If you reply that you might do these behaviours or have already been involved in such behaviours that break the law, you will not be identifiable through your participation in this survey.
Your participation in this project is entirely voluntary. If you agree to participate you do not have to complete any question(s) you are uncomfortable answering. Your decision to participate or not participate will in no way impact upon your current or future relationship with QUT (e.g. your grades). If you do agree to participate you can withdraw from the project without comment or penalty. However as the survey is anonymous once it has been submitted it will not be possible to withdraw.

EXPECTED BENEFITS
It is expected that this project will not directly benefit you. However, the results may be used to inform future changes to the driver licensing system to make it more suitable and effective for foreign-born drivers.
To recognise your contribution the research team is offering you the opportunity to be part of a draw to win one of five $100 Coles/Myer vouchers. At the end of November 2013, the prize will be drawn by a CARRS-Q staff member who is not involved in this research.
RISKS

There are no risks beyond normal day-to-day living associated with your participation in this project.
PRIVACY & CONFIDENTIALITYAll comments and responses are anonymous and will be treated confidentially unless required by law. The names of individual persons are not required in any of the responses. Only the principal researcher and the supervisors will have access to the content of the survey. Email or phone details for the prize draw will be collected separately at the conclusion of the survey and the prizes will be drawn at the conclusion of the study and only the five randomly chosen winners will be contacted to arrange delivery of each of the five $100 Coles/Myer vouchers. Contact details will be kept separate from the survey responses and this information will not be used for any other purpose than the prize draw. Once the prizes have been claimed and contact details will be destroyed.
Any data collected as part of this project will be stored securely as per QUT's Management of research data policy. Please note that non-identifiable data collected in this project may be used as comparative data in future projects.

CONSENT TO PARTICIPATEThe return of the completed paper survey or submitting the completed online survey is accepted as an indication of your consent to participate in this project.

QUESTIONS / FURTHER INFORMATION ABOUT THE PROJECTIf have any questions or require further information please contact one of the research team members below.
Jae Won Oh
Professor Narelle Haworth
3138 4751 jae.oh@qut.edu.au
3138 8417 n.haworth@qut.edu.au

CONCERNS / COMPLAINTS REGARDING THE CONDUCT OF THE PROJECTQUT is committed to research integrity and the ethical conduct of research projects. However, if you do have any concerns or complaints about the ethical conduct of the project you may contact the QUT Research Ethics Unit on 3138 5123 or email ethicscontact@qut.edu.au. The QUT Research Ethics Unit is not connected with the research project and can facilitate a resolution to your concern in an impartial manner.

Thank you for helping with this research project. Please keep this sheet for your information.

The first 3 questions are screening questions to see whether you meet the requirments for the research.

1. Are you a Korean Australian living in Australia (either you or your parents born in Korea)?

- O Yes
- O No

2. Are you aged between 16 to 25 years?

- O Yes
- O No

3. Do you currently hold a valid driver's licence of any class issued by Australian tranport authorities?

- O Yes
- O No

4. What is your date of birth in months and years?

	Month	Year
	○ 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ 8 ○ 9 ○ 10 ○ 11 ○ 12	○ 1987 ○ 1988 ○ 1989 ○ 1990 ○ 1991 ○ 1992 ○ 1993 ○ 1994 ○ 1995 ○ 1996 ○ 1997 ○ 1998

5. What is your gender?

- ○ Male
- ○ Female

6. What is your marital status?

- ○ Single
- ○ Girlfriend/Boyfriend
- ○ De facto
- ○ Married
- ○ No longer married (separated/divorced/widowed)

7. Are you studying?

- ○ Full-time
- ○ Part-time
- ○ Not studying

8. Are you employed?

- ○ Full-time
- ○ Part-time
- ○ Casual
- ○ Not employed

9. What is the highest level of education you have completed?

- ○ Primary (Grade 7)
- ○ Junior (Grade 10)
- ○ Senior (Grade 12)
- ○ Tafe/Traineeship/Apprenticeship
- ○ University

10. What is your residential postcode?

.....

11. What year did you first arrive in Australia?

.....

12. What language is most commonly spoken at your home?

.....

13. How would you rate your ability in spoken English?

- ○ Excellent
- ○ Very Good
- ○ Good
- ○ Fair
- ○ Poor

14. How would you rate your FATHER'S ability in spoken English?

- ○ Excellent
- ○ Very Good
- ○ Good
- ○ Fair
- ○ Poor

15. How would you rate your MOTHER'S ability in spoken English?

- ○ Excellent
- ○ Very Good
- ○ Good
- ○ Fair
- ○ Poor

16. What is your living status?

- ○ With both parents
- ○ With one parent
- ○ With siblings or relatives
- ○ With other non-relatives
- ○ Alone

17. What is your current residential status?

- ○ Australian citizen
- ○ Permanent resident
- ○ Overseas student
- ○ Working holiday visa
- ○ Visiting visa

18. On a scale from very Korean to very Australian, how would you describe your family?

- ○ Very Korean
- ○ Somewhat Korean
- ○ Neutral
- ○ Somewhat Australian
- ○ Very Australian

19. What driver's licence do you currently hold?

- ○ Learner
- ○ Provisional 1
- ○ Provisional 2
- ○ Open
- ○ My licence has been suspended

Other

.....

20. Did you initially obtain a driver's licence in Korea?

- ○ Yes
- ○ No

21. What state of Australia were you living in when you obtained your Learner's licence?

- ○ QLD
- ○ NSW
- ○ ACT
- ○ VIC
- ○ TAS
- ○ SA
- ○ WA
- ○ NT
- ○ Did not obtain Learner's licence in Australia

22. At what age did you obtain your Learner's lience (in years and months)?

	Years	Months
	○ 16 ○ 17 ○ 18 ○ 19 ○ 20 ○ 21 ○ 22 ○ 23 ○ 24 ○ 25	○ 0 ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ 8 ○ 9 ○ 10 ○ 11 ○ 12

23. How many cars did your family own when you were a Learner?

.....

24. Who did you mostly drive with during your Learner's stage?

- ○ Father
- ○ Mother
- ○ Instructor

Other

.....

25. Did you have any difficulties in receiving supervision during your Learner's stage?

- ○ Definitely Yes
- ○ Somewhat yes
- ○ Neutral
- ○ Somewhat No
- ○ Definitely No

26. How often were your parents available to supervise you during your Learner's stage?

- ○ Often
- ○ Somewhat Often
- ○ Average
- ○ Somewhat Rarely
- ○ Rarely

27. What age do your parents think it is reasonable to start learning to drive?

- ○ 16
- ○ 17
- ○ 18
- ○ 19
- ○ 20
- ○ 20+
- ○ Don't know

28. Have you passed your practical driving test in Australia?

- ○ Yes
- ○ No

29. What year and month did you first attempt the practical driving test?

	Year	Month
	○ 2003 ○ 2004 ○ 2005 ○ 2006 ○ 2007 ○ 2008 ○ 2009 ○ 2010 ○ 2011 ○ 2012 ○ 2013	○ 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ 8 ○ 9 ○ 10 ○ 11 ○ 12

30. When did you pass the practical driving test?

	Year	Month
	○ 2003 ○ 2004 ○ 2005 ○ 2006 ○ 2007 ○ 2008 ○ 2009 ○ 2010 ○ 2011 ○ 2012 ○ 2013	○ 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ 8 ○ 9 ○ 10 ○ 11 ○ 12

31. How many attempts did you take to pass your practical driving test?

- ○ 1
- ○ 2
- ○ 3
- ○ 4
- ○ 5
- ○ 6
- ○ 7
- ○ 8
- ○ 9
- ○ 10
- ○ 10+

32. What state of Australia were you living in when you obtained your Provisional licence?

- ○ QLD
- ○ NSW
- ○ ACT
- ○ VIC
- ○ TAS
- ○ SA
- ○ WA
- ○ NT
- ○ Did not obtain Provisional licence in Australia

33. What are your thoughts on the requirement of hours for supervision during the Learner's stage? (e.g. 100hrs for QLD, 120hrs for VIC, 120hrs for NSW, etc.)

- ○ Definitely necessary
- ○ Somewhat necessary
- ○ Neutral
- ○ Somewhat lengthy
- ○ Too lengthy

34. What do you think of the graduated driver licensing system in Australia?

- ○ Definitely straightforward
- ○ Somewhat straightforward
- ○ Neutral
- ○ Somewhat complicated
- ○ Definitely complicated

35. By having a graduated licensing system, do you believe that it is effective in increasing road safety?

- ○ Highly Effective
- ○ Effective
- ○ Neutral
- ○ Ineffective
- ○ Highly Ineffective

36. If you had any, did you experience any difficulties due to language barriers during your written and/or practical driving examination?

- ○ Significant amount of difficulty
- ○ Somewhat Significant
- ○ Neutral
- ○ Somewhat Insignificant
- ○ Insignificant amount of difficulty

37. Did you experience any significant difficulties during the licensing procedure due to cost related issues?

- ○ Significant amount of difficulty
- ○ Somewhat Significant
- ○ Neutral
- ○ Somewhat Insignificant
- ○ Insignificant amount of difficulty

38. How accurate was your logbook entry?

- ○ High accuracy
- ○ Somewhat High
- ○ Average
- ○ Somewhat Low
- ○ Low accuracy
- ○ Logbook was not a requirement

39. Was your driving instructor Korean or Australian?

- ○ Korean
- ○ Australian
- ○ Did not have professional lessons

40. Do you own your own car? You might be paying off a loan, borrowed money from Mum and Dad, or been given a car for your own use by parents.

- ○ Yes
- ○ No

41. Think about your driving lately, in a typical week

roughly how many kilometres did you drive?

.....

roughly how many hours did you spend driving?

.....

42. In the past month, was your driving

- ○ all on city roads
- ○ mainly city roads, some on country roads
- ○ equally on country and city roads
- ○ mainly on country roads, some on city roads
- ○ all on country roads

43. In the last six months, how often did you do the following?

	Never	Occasionally	Sometimes	Usually	Nearly all the time
You overtook a car on the left	O	O	O	O	O
You did an illegal U-turn	O	O	O	O	O
Your passengers didn't wear seatbelts	O	O	O	O	O
You raced out of an intersection when the light went green	O	O	O	O	O
You went more than 20km/hr over the speed limit (e.g. 60 in a 40)	O	O	O	O	O
You travelled in the right lane on multilane highways	O	O	O	O	O
You spoke on a mobile that you held in your hands	O	O	O	O	O
You misjudged the stopping distance you needed	O	O	O	O	O
You went up to 10km/hr over the speed limit (e.g. 60 in a 50)	O	O	O	O	O
You went too fast around a corner	O	O	O	O	O
You sped up when the lights went yellow	O	O	O	O	O
You drove over the speed limit in areas where it was unlikely there was a radar or speed camera	O	O	O	O	O
You drove after taking an illicit drug such as marijuana or ecstasy	O	O	O	O	O
You went 10-20km/hr over the speed limit (e.g. 72 in a 60)	O	O	O	O	O
You sped at night on roads that were not well lit	O	O	O	O	O

44. How often in the last six months did you do these things?

	Never	Occasionally	Sometimes	Usually	Nearly all the time
You misjudged the gap when overtaking another vehicle	O	O	O	O	O
You misjudged the gap when you were turning right	O	O	O	O	O
You entered the road in front of another vehicle	O	O	O	O	O
You drove when you thought you may have been over the legal alcohol limit	O	O	O	O	O
You carried more passengers than there were seatbelts in your car	O	O	O	O	O
You drove a high-powered vehicle	O	O	O	O	O
You carried more passengers than could legally fit in your car	O	O	O	O	O
You went for a drive with your friends giving you directions to where they wanted to go	O	O	O	O	O
You misjudged the speed of an oncoming vehicle	O	O	O	O	O
You misjudged the speed exiting a main road	O	O	O	O	O
You didn't wear a seatbelt if it was only for a short trip	O	O	O	O	O
Your car was full of your friends as passengers	O	O	O	O	O
You didn't always wear a seatbelt	O	O	O	O	O
You drove without a valid licence because it had been suspended	O	O	O	O	O
You turned right into the path of another vehcile	O	O	O	O	O
You missed your exit or turn	O	O	O	O	O

45. In the last six months, how often did you do the following?

	Never	Occasionally	Sometimes	Usually	Nearly all the time
Your drove at night	O	O	O	O	O
You allowed your driving style to be influenced by your mood	O	O	O	O	O
You didn't always indicate when you were changing lanes	O	O	O	O	O
You drove faster if you were in a bad mood	O	O	O	O	O
You drove when you knew you were tired	O	O	O	O	O
Your driving was affected by emotions like anger or frustration	O	O	O	O	O
You took chances for the fun of it when driving in traffic	O	O	O	O	O
Your drove in the rain	O	O	O	O	O
You carried 2 or more passengers after 11:00pm	O	O	O	O	O
You drove at peak times in the morning and in the afternoon	O	O	O	O	O
You carried your friends as passengers at night	O	O	O	O	O
You drove on the weekend	O	O	O	O	O
You followed someone who had cut you off	O	O	O	O	O
You yelled or used rude gestures at another driver who had cut you off	O	O	O	O	O
You raced with other drivers	O	O	O	O	O
Your drove at dusk or dawn	O	O	O	O	O

WE WOULD LIKE TO KNOW WHAT YOU THINK ABOUT THE ROAD RULES

For all of these questions, 'road rules' also includes the graduated driver licensing restrictions you have to follow now you have your licence. When we ask about 'bending the road rules', this means any time you did not follow the road rules completely, and includes things like going over the speed limit by any amount, reading a text on your mobile whist driving, or following the car in front a little too closely.

46. How much do you agree with the following statements?

	Disagree			Neutral			Agree
Road rules are for other drivers	○	○	○	○	○	○	○
It's okay to bend the road rules when I want to	○	○	○	○	○	○	○
It's sometimes okay to bend the rules	○	○	○	○	○	○	○
Everybody has fun on the road, who cares about the road rules?	○	○	○	○	○	○	○
More bad than good comes from ignoring the road rules	○	○	○	○	○	○	○
Road rules are made to be bent	○	○	○	○	○	○	○
Not following the road rules is not worth the risks involved	○	○	○	○	○	○	○
It's easy to stay safe and follow the road rules	○	○	○	○	○	○	○
Following the rules is sometimes drivers shouldn't have to think about, it should just happen	○	○	○	○	○	○	○
It's okay to bend the rules if no-one gets hurt	○	○	○	○	○	○	○
Road rules are just a guide for drivers	○	○	○	○	○	○	○
You can't follow the rules all the time	○	○	○	○	○	○	○

47. What about your agreement with these statements?

	Disagree			Neutral			Agree
When I drove in a risky way, I did so because I remembered my parents did it too	○	○	○	○	○	○	○
Seeing other novice drivers bend the rules influenced me to do the same	○	○	○	○	○	○	○
When I bent the rules, I did so because I saw this done by other novice drivers	○	○	○	○	○	○	○
Seeing my parents bend some road rules influenced me to bend some rules	○	○	○	○	○	○	○
When I drove in a risky way, I did so because I remembered my friends did it too	○	○	○	○	○	○	○
Seeing my friends bend the road rules influenced me to bend some rules	○	○	○	○	○	○	○

48. Thnk about the driving you will do over the next year. How likely is it that you will bend the road rules?

- O Highly Likely
- O Likely
- O Neutral
- O Unlikely
- O Highly Unlikely

49. Thinking about your driving over the last six months, how much do you agree with the following statements?

	Disagree			Neutral			Agree
My friends wouldn't have traveled as my passengers because I bent the road rules	O	O	O	O	O	O	O
Following all the road rules didn't let me have fun when I was driving	O	O	O	O	O	O	O
Overall, more bad than good comes from bending the road rules	O	O	O	O	O	O	O
Bending the road rules meant I could have gotten a lecture or a fine from a police officer	O	O	O	O	O	O	O
Not following the road rules sometimes meant more wear and tear on my car, such as replacing tyres sooner	O	O	O	O	O	O	O
I would have felt great if I had bent the road rules	O	O	O	O	O	O	O
Never bending any rules on the road made the journey boring	O	O	O	O	O	O	O
My friends liked to travel with me because I bent the rules and made the trip more exciting	O	O	O	O	O	O	O
Weaving in and out of traffic would have gotten me to my destination sooner	O	O	O	O	O	O	O

50. How much would you have agreed with the following statements over the last six months?							
	Disagree			Neutral			Agree
Bending the rules meant I could go where I wanted when I wanted	O	O	O	O	O	O	O
My friends would have thought I was really stupid if I bent the road rules	O	O	O	O	O	O	O
Taking risks on the road like bending the rules gave me a thrill	O	O	O	O	O	O	O
Showing off in the car made me feel good	O	O	O	O	O	O	O
I would have lost the respect of my friends and family if they knew I had bent the road rules	O	O	O	O	O	O	O
Bending the rules made me fell bad	O	O	O	O	O	O	O
Bending the rules made me popular with my friends	O	O	O	O	O	O	O
My parents wouldn't have been concerned if they found out I had bent the road rules	O	O	O	O	O	O	O
My friends made fun of me if I didn't fool around in the car	O	O	O	O	O	O	O
Bending the rules like speeding saved me time	O	O	O	O	O	O	O

51. What about for these?

	Disagree			Neutral			Agree
The people I mix with a lot don't follow the road rules	O	O	O	O	O	O	O
My friends don't follow all the road rules all the time	O	O	O	O	O	O	O
The people I consider important to me don't mind bending the rules now and then	O	O	O	O	O	O	O
My parents follow all the rules all the time	O	O	O	O	O	O	O
My friends think it is okay to bend the rules	O	O	O	O	O	O	O
The people I have known for a long time follow all the rules	O	O	O	O	O	O	O
The people I spend the most time with make sure they don't bend the road rules	O	O	O	O	O	O	O
The people who were influential in my early years of life don't worry about following all the rules	O	O	O	O	O	O	O
Other young drivers I know fool around while driving	O	O	O	O	O	O	O
My friends aren't concerned about following the rules; they just want to have fun	O	O	O	O	O	O	O

52. Think for a moment about the type of person your age who bends the road rules. We are not interested in anyone in particular, just the typical young driver. What is your opinion of the type of person your age and gender and with your driving experience who bends the road rules?

	Not at all descriptive				Extremely descriptive
Irresponsible	O	O	O	O	O
Show-off	O	O	O	O	O
Aware of dangers	O	O	O	O	O
Impatient	O	O	O	O	O
Sensible	O	O	O	O	O
Lead-foot	O	O	O	O	O
Slow	O	O	O	O	O
Good driver	O	O	O	O	O
Foolish	O	O	O	O	O
Immature	O	O	O	O	O
Safe	O	O	O	O	O
Cautious	O	O	O	O	O

53. In general, how similar are you to the type of person your age who bends the road rules?

Not at all similar				Very similar
O	O	O	O	O

54. Do the characteristics that describe the type of young driver also describe you?

Definitely no				Definitely yes
O	O	O	O	O

55. How many of the following people bend the road rules?

	None at all				All of them
Your parents	O	O	O	O	O
Your Korean friends	O	O	O	O	O
Your Australian friends	O	O	O	O	O
Australian young drivers	O	O	O	O	O
All Australian drivers	O	O	O	O	O

56. Have you been caught committing any driving offences in the last six months?

- ○ Yes
- ○ No

57. If yes, what offences have you been caught for? (select all that apply)

- ☐ Speeding
- ☐ Failure to give way
- ☐ Driving under the influence
- ☐ Failure to display your P-plates

Other

.....

58. If yes, what penalties did you receive? (select all that apply)

- ☐ Warning
- ☐ Ticket/fine
- ☐ Notice to appear in Court
- ☐ Vehicle impoundment
- ☐ Demerit points

Other

.....

59. Have you bent any road rules in the last six months, but parents took the fine and/or demerit points for you? (please remember that this information is confidential)

- ○ No
- ○ Yes

If yes, how many times?

.....

60. Have you been pulled over by the police in the last six months, but managed to talk your way out of a ticket?

- ○ No
- ○ Yes

If yes, how many times?

.....

61. Have you crashed your car in the last six months?

- O No
- O Yes

If yes, how many times?

.....

62. How much pressure (either negative or positive) do you feel from the following people to either bend or follow the road rules?

	An extreme amount of pressure to follow the rules		No pressure to either bend or follow the rules		An extreme amount of pressure to bend the rules
Your friends	O	O	O	O	O
Your parents	O	O	O	O	O
Yourself	O	O	O	O	O
Your passengers	O	O	O	O	O
Other road users	O	O	O	O	O
The police	O	O	O	O	O

THINK ABOUT YOUR PARENTS' DRIVING AND YOUR FRIENDS' DRIVING AND ANSWER THE FOLLOWING QUESTIONS

63. Do your parents both drive?

- O Father only
- O Mother only
- O Both drive
- O Neither drive

64. In general, how safe a driver do you think

	Not very good				Very good
You were during the last six months?	○	○	○	○	○
Your mother is?	○	○	○	○	○
Your friends are?	○	○	○	○	○
Your father is?	○	○	○	○	○
Other Korean-born drivers your age are?	○	○	○	○	○
Other Australian drivers your age are?	○	○	○	○	○

Thank you for your participation!
We believe that your responses are a valuable source to our research and believe that the results may be used to inform future changes to the driver licensing system to make it more suitable and effective for foreign-born drivers.
To recognise your contribution the research team is offering you the opportunity to be part of a draw to win one of five $100 Coles/Myer vouchers. PLEASE READ THE FOLLOWING TO COMPLETE THE SURVEY.

Please press the link below for prize draw where you will have a new pop-up page. Enter your details, submit it and RETURN to this page to press the submit button to finalise the questionnaire.

You must PRESS SUBMIT on this page after completing prize draw page to COMPLETE THE SURVEY.To take part in the prize draw please press the following link to submit your details.

****CLICK THIS LINK for prize draw****

Thank you for your participation. However, unfortunately you do not meet the requirements of being a Korean Australian driver aged between 16 to 25 years. Hence we are sorry to advise that you can no longer proceed with the questionnaire. Thank you and we are grateful for your interest to our research.

Appendix B

Research Question 1: What delays or difficulties do young foreign-born Australians experience in entry and progression through the GDL system?

- Learner Experience

Statistics

		Who did you mostly drive with during your Learner's stage?	Did you have any difficulties in receiving supervision during your Learner's stage?	How often were your parents available to supervise you during your Learner's stage?	How many cars did your family own when you were a Learner?-
N	Valid	77	77	77	73
	Missing	1	1	1	5
Mean		1.9870	3.4675	2.3247	1.71
Std. Error of Mean		.08162	.14150	.11610	.098
Median		2.0000	4.0000	2.0000	2.00
Std. Deviation		.71623	1.24165	1.01879	.841

Frequency Table

Who did you mostly drive with during your Learner's stage?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Father	19	24.4	24.7	24.7
	Mother	41	52.6	53.2	77.9
	Instructor	16	20.5	20.8	98.7
	Other	1	1.3	1.3	100.0
	Total	77	98.7	100.0	
Missing	System	1	1.3		
Total		78	100.0		

Did you have any difficulties in receiving supervision during your Learner's stage?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Definitely Yes	4	5.1	5.2	5.2
	Somewhat Yes	17	21.8	22.1	27.3
	Neutral	15	19.2	19.5	46.8
	Somewhat No	21	26.9	27.3	74.0
	Definitely No	20	25.6	26.0	100.0
	Total	77	98.7	100.0	
Missing	System	1	1.3		
Total		78	100.0		

How often were your parents available to supervise you during your Learner's stage?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Often	18	23.1	23.4	23.4
	Somewhat Often	27	34.6	35.1	58.4
	Average	23	29.5	29.9	88.3
	Somewhat Rarely	7	9.0	9.1	97.4
	Rarely	2	2.6	2.6	100.0
	Total	77	98.7	100.0	
Missing	System	1	1.3		
Total		78	100.0		

- Gender vs. Licensure

Crosstabs

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Licensure * What is your gender?	49	90.7%	5	9.3%	54	100.0%

Licensure * What is your gender? Crosstabulation

Count

		What is your gender?		
		Male	Female	Total
Licensure	16.00	2	0	2
	17.00	3	4	7
	18.00	7	7	14
	19.00	5	4	9
	20.00	5	6	11
	21.00	1	1	2
	22.00	1	2	3
	23.00	0	1	1
Total		24	25	49

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.659[a]	7	.818
Likelihood Ratio	4.824	7	.681
Linear-by-Linear Association	1.188	1	.276
N of Valid Cases	49		

a. 12 cells (75.0%) have expected count less than 5. The minimum expected count is .49.

Appendix C

Research Question 2. What are the attitudes of the foreign-born novice drivers and their parents towards GDL?

Statistics

		What are your thoughts on the requirement of hours for supervision during the Learner's stage? (e.g. 100hrs for QLD, 120hrs for VIC, 120hrs for NSW, etc.)	What do you think of the graduated driver licensing system in Australia?	By having a graduated licensing system, do you believe that it is effective in increasing road safety?	If you had any, did you experience any difficulties due to language barriers during your written and/or practical driving examination?	Did you experience any significant difficulties during the licensing procedure due to cost related issues?	How accurate was your logbook entry?
N	Valid	77	77	77	77	77	77
	Missing	1	1	1	1	1	1
Mean		2.4416	2.6104	2.2597	4.3247	3.3896	3.0130
Std. Error of Mean		.13895	.11715	.10193	.12867	.15484	.21756
Median		2.0000	3.0000	2.0000	5.0000	3.0000	2.0000
Std. Deviation		1.21929	1.02798	.89447	1.12906	1.35875	1.90907

What are your thoughts on the requirement of hours for supervision during the Learner's stage? (e.g. 100hrs for QLD, 120hrs for VIC, 120hrs for NSW, etc.)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Definitely necessary	20	25.6	26.0	26.0
	Somewhat necessary	26	33.3	33.8	59.7
	Neutral	12	15.4	15.6	75.3
	Somewhat lengthy	15	19.2	19.5	94.8
	Too lengthy	4	5.1	5.2	100.0
	Total	77	98.7	100.0	
Missing	System	1	1.3		
Total		78	100.0		

What do you think of the graduated driver licensing system in Australia?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Definitely straightforward	11	14.1	14.3	14.3
	Somewhat straightforward	25	32.1	32.5	46.8
	Neutral	27	34.6	35.1	81.8
	Somewhat complicated	11	14.1	14.3	96.1
	Definitely complicated	3	3.8	3.9	100.0
	Total	77	98.7	100.0	
Missing	System	1	1.3		
Total		78	100.0		

By having a graduated licensing system, do you believe that it is effective in increasing road safety?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Highly Effective	17	21.8	22.1	22.1
	Effective	29	37.2	37.7	59.7
	Neutral	25	32.1	32.5	92.2
	Ineffective	6	7.7	7.8	100.0
	Total	77	98.7	100.0	
Missing	System	1	1.3		
Total		78	100.0		

If you had any, did you experience any difficulties due to language barriers during your written and/or practical driving examination?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Significant amount of difficulty	3	3.8	3.9	3.9
	Somewhat Significant	4	5.1	5.2	9.1
	Neutral	10	12.8	13.0	22.1
	Somewhat Insignificant	8	10.3	10.4	32.5
	Insignificant amount of difficulty	52	66.7	67.5	100.0
	Total	77	98.7	100.0	
Missing	System	1	1.3		
Total		78	100.0		

Did you experience any significant difficulties during the licensing procedure due to cost related issues?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Significant amount of difficulty	6	7.7	7.8	7.8
	Somewhat Significant	18	23.1	23.4	31.2
	Neutral	18	23.1	23.4	54.5
	Somewhat Insignificant	10	12.8	13.0	67.5
	Insignificant amount of difficulty	25	32.1	32.5	100.0
	Total	77	98.7	100.0	
Missing	System	1	1.3		
Total		78	100.0		

How accurate was your logbook entry?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	High accuracy	23	29.5	29.9	29.9
	Somewhat High	17	21.8	22.1	51.9
	Average	9	11.5	11.7	63.6
	Somewhat Low	8	10.3	10.4	74.0
	Low accuracy	4	5.1	5.2	79.2
	Logbook was not a requirement	16	20.5	20.8	100.0
	Total	77	98.7	100.0	
Missing	System	1	1.3		
Total		78	100.0		

Appendix D

Research Question 3. What are the driving behaviours of foreign-born novice drivers?

Mann Whitney U-test

	How often in the last six months did you do these things?- You drove when you thought you may have been over the legal alcohol limit	In the last six months, how often did you do the following?- You drove after taking an illicit drug such as marijuana or ecstasy	In the last six months, how often did you do the following?- You spoke on a mobile that you held in your hands	In the last six months, how often did you do the following?- You did an illegal U-turn	In the last six months, how often did you do the following?- You didn't always indicate when you were changing lanes	In the last six months, how often did you do the following?- You drove over the speed limit in areas where it was unlikely there was a radar or speed camera	In the last six months, how often did you do the following?- You went up to 10km/hr over the speed limit (e.g. 60 in a 50)	In the last six months, how often did you do the following?- You went 10-20km/hr over the speed limit (e.g. 72 in a 60)
Mann-Whitney U	440.000	491.000	332.500	410.500	458.500	343.000	337.500	318.500
Wilcoxon W	650.000	1817.000	542.500	620.500	668.500	553.000	547.500	528.500
Z	-1.732	-.548	-2.834	-1.564	-.727	-2.315	-2.321	-2.720
Asymp. Sig. (2-tailed)	.083	.584	.005	.118	.467	.021	.020	.007

Appendix D table continued.

In the last six months, how often did you do the following?- You went more than 20km/hr over the speed limit (e.g. 60 in a 40)	In the last six months, how often did you do the following?- You sped at night on roads that were not well lit	How often in the last six months did you do these things?- You didn't wear a seatbelt if it was only for a short trip	How often in the last six months did you do these things?- You didn't always wear a seatbelt	In the last six months, how often did you do the following?- Your passengers didn't wear seatbelts	How often in the last six months did you do these things?- You carried more passengers than there were seatbelts in your car	How often in the last six months did you do these things?- You carried more passengers than could legally fit in your car
323.500	393.500	496.000	464.500	404.000	415.000	370.000
533.500	603.500	706.000	674.500	614.000	625.000	580.000
-2.897	-2.094	-.275	-1.060	-1.958	-1.810	-2.589
.004	.036	.784	.289	.050	.070	.010

Perception on the benefits and loss of bending road rules

Mann Whitney U-test

Test Statistics[a]

	Bending the rules meant I could go where I wanted when I wanted	My friends would have thought I was really stupid if I bent the road rules	Taking risks on the road like bending the rules gave me a thrill	Showing off in the car made me feel good	I would have lost the respect of my friends and family if they knew I had bent the road rules	Bending the rules made me fell bad	Bending the rules made me popular with my friends	My parents wouldn't have been concerned if they found out I had bent the road rules	My friends made fun of me if I didn't fool around in the car	Bending the rules like speeding saved me time
Mann-Whitney U	442.000	463.500	451.000	434.500	434.000	400.500	488.000	478.500	440.500	284.000
Wilcoxon W	652.000	673.500	661.000	644.500	1760.000	1726.500	698.000	1804.500	650.500	494.000
Z	-.987	-.608	-.922	-1.165	-.989	-1.428	-.386	-.462	-1.194	-2.978
Asymp. Sig. (2-tailed)	.324	.543	.357	.244	.322	.153	.700	.644	.233	.003

a. Grouping Variable: licence

Following the GDL requirements

Mann Whitney U-test

Test Statistics[a]

	How often in the last six months did you do these things?- You drove a high-powered vehicle	In the last six months, how often did you do the following?- Your drove at night	In the last six months, how often did you do the following?- You carried 2 or more passengers after 11:00pm	In the last six months, how often did you do the following?- You carried your friends as passengers at night
Mann-Whitney U	439.500	322.500	308.000	274.500
Wilcoxon W	649.500	532.500	518.000	484.500
Z	-1.434	-2.468	-2.798	-3.235
Asymp. Sig. (2-tailed)	.152	.014	.005	.001

a. Grouping Variable: licence

Appendix E

Tests that were conducted by categorising the participants into 'less Korean' and 'more Korean'

T-Test

Group Statistics

	How Korean is your family	N	Mean	Std. Deviation	Std. Error Mean
Did you have any difficulties in receiving supervision during your Learner's stage?	1	27	3.5926	1.18514	.22808
	2	44	3.4091	1.24486	.18767

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Did you have any difficulties in receiving supervision during your Learner's stage?	Equal variances assumed	.368	.546	.614	69	.541	.18350	.29891	-.41281	.77981
	Equal variances not assumed			.621	57.255	.537	.18350	.29537	-.40790	.77490

T-Test

Group Statistics

	How Korean is your family	N	Mean	Std. Deviation	Std. Error Mean
How often were your parents available to supervise you during your Learner's stage?	1	27	2.3704	1.07946	.20774
	2	44	2.3864	.99337	.14976

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
How often were your parents available to supervise you during your Learner's stage?	Equal variances assumed	1.368	.246	-.064	69	.949	-.01599	.25098	-.51669	.48471
	Equal variances not assumed			-.062	51.615	.950	-.01599	.25609	-.52997	.49799

Group Statistics

	How Korean is your family	N	Mean	Std. Deviation	Std. Error Mean
What are your thoughts on the requirement of hours for supervision during the Learner's stage? (e.g. 100hrs for QLD, 120hrs for VIC, 120hrs for NSW, etc.)	1	27	2.2963	1.29540	.24930
	2	44	2.6136	1.16571	.17574
What do you think of the graduated driver licensing system in Australia?	1	27	2.5556	1.08604	.20901
	2	44	2.7045	1.00185	.15103
By having a graduated licensing system, do you believe that it is effective in increasing road safety?	1	27	1.9630	.80773	.15545
	2	44	2.5000	.90219	.13601
If you had any, did you experience any difficulties due to language barriers during your written and/or practical driving examination?	1	27	4.1481	1.26198	.24287
	2	44	4.5000	.95235	.14357
Did you experience any significant difficulties during the licensing procedure due to cost related issues?	1	27	3.1481	1.51159	.29091
	2	44	3.5000	1.24825	.18818
How accurate was your logbook entry?	1	19	2.0526	1.17727	.27008
	2	33	2.1212	1.02340	.17815

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
What are your thoughts on the requirement of hours for supervision during the Learner's stage? (e.g. 100hrs for QLD, 120hrs for VIC, 120hrs for NSW, etc.)	Equal variances assumed	.136	.713	-1.067	69	.290	-.31734	.29732	-.91048	.27580
	Equal variances not assumed			-1.040	50.691	.303	-.31734	.30501	-.92977	.29509
What do you think of the graduated driver licensing system in Australia?	Equal variances assumed	.363	.549	-.589	69	.558	-.14899	.25287	-.65346	.35548
	Equal variances not assumed			-.578	51.716	.566	-.14899	.25787	-.66651	.36853
By having a graduated licensing system, do you believe that it is effective in increasing road safety?	Equal variances assumed	2.790	.099	-2.531	69	.014	-.53704	.21215	-.96027	-.11381

	Equal variances not assumed			-2.600	59.841	.012	-.53704	.20655	-.95022	-.12385
If you had any, did you experience any difficulties due to language barriers during your written and/or practical driving examination?	Equal variances assumed	2.765	.101	-1.333	69	.187	-.35185	.26390	-.87832	.17462
	Equal variances not assumed			-1.247	44.092	.219	-.35185	.28213	-.92042	.21671
Did you experience any significant difficulties during the licensing procedure due to cost related issues?	Equal variances assumed	3.496	.066	-1.063	69	.291	-.35185	.33089	-1.01196	.30825
	Equal variances not assumed			-1.016	47.304	.315	-.35185	.34647	-1.04873	.34503
How accurate was your logbook entry?	Equal variances assumed	.255	.616	-.220	50	.827	-.06858	.31140	-.69405	.55689
	Equal variances not assumed			-.212	33.503	.833	-.06858	.32355	-.72647	.58931

Group Statistics

	How Korean is your family	N	Mean	Std. Deviation	Std. Error Mean
How many of the following people bend the road rules?- Your parents	1	27	1.5185	.89315	.17189
	2	42	1.7857	.71689	.11062
How many of the following people bend the road rules?- Your Korean friends	1	27	2.3333	.87706	.16879
	2	44	2.3864	.94539	.14252
How many of the following people bend the road rules?- Your Australian friends	1	27	2.8148	.96225	.18519
	2	44	2.8182	.84283	.12706
How many of the following people bend the road rules?- Australian young drivers	1	27	3.3333	.87706	.16879
	2	44	3.5227	.87574	.13202
How many of the following people bend the road rules?- All Australian drivers	1	27	2.7407	.65590	.12623
	2	44	2.7045	.66750	.10063

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
How many of the following people bend the road rules?- Your parents	Equal variances assumed	.213	.646	-1.371	67	.175	-.26720	.19486	-.65615	.12175
	Equal variances not assumed			-1.307	46.895	.198	-.26720	.20441	-.67843	.14404
How many of the following people bend the road rules?- Your Korean friends	Equal variances assumed	.552	.460	-.236	69	.814	-.05303	.22497	-.50183	.39577
	Equal variances not assumed			-.240	58.355	.811	-.05303	.22091	-.49518	.38912
How many of the following people bend the road rules?- Your Australian friends	Equal variances assumed	.403	.528	-.015	69	.988	-.00337	.21751	-.43728	.43054
	Equal variances not assumed			-.015	49.596	.988	-.00337	.22458	-.45455	.44781
How many of the following people bend the road rules?- Australian young drivers	Equal variances assumed	.313	.577	-.884	69	.380	-.18939	.21421	-.61673	.23794
	Equal variances not assumed			-.884	55.079	.381	-.18939	.21429	-.61883	.24004
How many of the following people bend the road rules?- All Australian drivers	Equal variances assumed	.243	.624	.223	69	.824	.03620	.16212	-.28722	.35961
	Equal variances not assumed			.224	55.898	.823	.03620	.16143	-.28720	.35959